Quality Healthcare from the Nurses' Perspective

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Abstract

A growing interest in evaluating quality of healthcare services has led to several initiatives geared towards quality improvement and increased efficiency by focusing on patient needs and collected evidence. Efforts designed to standardize quality healthcare delivery are difficult because of variation in perspectives and disagreement as to what actually indicates quality healthcare. To help bring more clarity to the topic of quality care this study performed a secondary analysis on data gathered from the 'provider morale' section of the 'Managing Quality in Canadian Hospitals' project. The purpose of this study was to address how nurses' perceptions of distress, work place recognition and satisfaction influenced their assessment of quality care in Saskatoon hospitals. The conservation of resources (COR) theory was used as a theoretical framework to guide the development of an understanding of nurses' perceptions through a focus on occupational distress, recognition, and job satisfaction as a potential means of observing environmental effects on quality of care. This research established that there were significant positive relationships between recognition-quality, satisfaction-quality and recognition-satisfaction; suggesting that recognition and satisfaction can be viewed as work related resources and indicators of nurses' perceptions of quality care delivery. Significant negative relationships were found between distress-recognition and distress-satisfaction; suggesting that distress levels have an effect on perceptions of nursing work resources. The research findings also indicated that there was a significant difference in how nursing units perceived quality and distress, but no significant difference in perceptions of recognition or satisfaction; suggesting that work place resources have different effects, that there are other resources in play on units which affect perceptions, and that the impact of recognition and satisfaction on quality and distress perceptions differs between nursing units. The results of this study provide nurses, nursing

managers, and healthcare organizations with a deeper understanding of how resources and stress processes in work environments effect the perception of quality care delivery.

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Chapter 1 Introduction

1.1 Statement of the Problem

Healthcare is changing, research has shown that the cost of healthcare is being driven by price inflation, increased lengths of stay in hospitals, remuneration of healthcare professionals, an aging population, improved medical technologies, and the changes in clinical practices that accompany new technologies (Canadian Institute for Health Information, 2011). The 9th annual National Report Card on Health Care (Canadian Medical Association, 2009) indicated that residents of Saskatchewan and Manitoba rated the quality of their healthcare services lower than the rest of the country. Moreover, the Organization for Economic Co-operation and Development (OECD) reports that in Canada access to physicians and diagnostic technologies remains lower than the OECD averages, although the health spending per capita remains above the OECD average (Organization for Economic Co-operation and Development, 2013). Further, federal and provincial spending related to healthcare is on the rise (Canadian Institute for Health Information, 2011). This increase in expenditures leads to an increased need to demonstrate the value and quality of services. Therefore, it has become important to achieve a conceptualization of what 'quality healthcare' looks like and the factors that influence a quality healthcare system.

1.2 Purpose of the Study

This study, 'Quality Healthcare from the Nurses' Perspective', built from baseline data gathered by the MERCURi group for the 'Managing Quality in Canadian Hospitals' project by utilizing the results of the nurses' questionnaires. Specifically, this study considered the data from the 'provider morale' section of the larger study (which consisted of career satisfaction, professional equity, distress, and excitement at work measures). The larger study, 'Managing Quality in Canadian Hospitals' (Lepnurm, Backman, Dobson, Keegan, Lockhart, Sicotte and

Stamler, 2007), investigated various aspects of the healthcare system that affect the quality of care provided; this project hypothesized that "quality of care [was] a function of: structuring of tasks, work culture, deployment of resources, and provider morale" (Lepnurm et al., 2007, p. 12d). Understanding this, the perspective of health care providers, specifically nurses, was examined in order to attain a realistic understanding of how organizational environments may affect nurses and consequently affect the quality of healthcare services.

1.3 Relevance and Significance

A growing interest in evaluating quality of healthcare services has led to several initiatives geared toward quality improvement and increased efficacy focusing on patient needs. However, efforts designed to standardize quality healthcare delivery are difficult because of variations in treatment preferences and responses to those treatments. Large scale projects usually rely on quantitative data, indicators, such as stroke incidences and successful treatment rates, are compared to denote improved quality through clinical measurement criteria. These types of studies illustrate performance indicators. However, analysis of quantitative data alone does not always take into account patient's or healthcare professional's perceptions of quality care delivery or many difficult to measure beliefs and understandings that are not captured within quantitative parameters.

There is also little Canadian research looking at the impact of employee morale as an indicator of quality. The 'Managing Quality in Canadian Hospitals' project was the first in Saskatchewan to explore employee morale as a quality indicator. As such, this study will contribute to the body of knowledge by exploring the quality and morale perceptions of nurses in Saskatoon hospitals. Further, this research contributes to the body of knowledge using Hobfoll's

conservation of resources (COR) theory in relation to nurses' stress processes and relating it with their quality of care perceptions, which to the writer's knowledge has yet to have been done.

Chapter 2 Background and Literature Review

2.1 Nursing Context

There are three types of regulated professional nurses in Canada (licensed practical nurses (LPN), registered nurses (RN), and registered psychiatric nurses (RPN)); each type of nurse has their own regulating body that is held accountable, through provincial legislation, for the provision of safe, ethical and competent nursing care. The regulatory bodies are responsible for providing codes of ethics, standards of practice, approving nursing education programs and defining scope of practice for their members (Canadian Nurses Association, 2012). In Saskatchewan, since the year 2000, new RN applicants have been required to achieve a four year bachelor's degree in nursing, LPNs have been required to achieve a one and a half year certificate, and RPNs have been required to achieve a three year diploma. Following achievement of their basic education, all three nurses must pass their own respective licensing exam in order to gain membership and a license to practice from their regulating bodies. Once they have achieved these requirements, professional nurses are considered prepared to function independently in their nursing care and are responsible for ensuring that they work within their basic nursing educations and scopes of practice. The scope of practice for professional nurses varies by regulating body and employer (Registered Psychiatric Nurses Association of Saskatchewan, Saskatchewan Association of Licensed Practical Nurses and Saskatchewan Registered Nurses Association, 2000).

2.2 Nursing Culture

Socialization is defined as the state in which a person is accommodated into a cultural group. Professional nursing education can be considered the start of a secondary socialization process that continues through to the nurses' entry into the workplace culture; it is a practice through

which an individual learns the roles, values, knowledge and behaviors that are important for entry into a new social group or profession (Dinmohammadi, Peyrovi and Mehrdad, 2013). The purpose of the socialization process is to create an understanding for the individual of who they are and their role as a nurse. The socialization process starts anew once nurses enter the work place and encounters a new culture to which they must adjust. Research states that successful positive socialization leads to the achievement of a professional identity, the ability to cope with the nursing role, and professional and organizational commitment (Dinmohammadi, Peyrovi and Mehrdad, 2013).

Within their code of ethics the Canadian Nurses Association (CNA) states that RNs have professional values and corresponding responsibilities to their patients (the RN values are: providing safe, compassionate, competent and ethical care; promoting health and well-being; promoting and respecting informed decision making; preserving dignity; maintaining privacy and confidentiality; promoting justice; and being accountable) (Canadian Nurses Association, 2008). Further, the Saskatchewan Association of Licensed Practical Nurses (SALPN) states in their code of ethics that LPNs have an ethical responsibility to respect the dignity and rights of their clients and colleagues while fulfilling their social contract through their responsibility to the public, clients, the profession, colleagues, and to oneself for ethical practice (Saskatchewan Association of Licensed Practical Nurses, 2012). The values and ethics above are taught alongside theoretical and practical medical knowledge to nursing students during their socialization process, wherein they are expected to internalize the lessons and apply them to practice in their role as a nurse.

While performing their nursing role, nurses work in collaborative practice environments with other healthcare providers (i.e. unlicensed caregivers, therapists, volunteers, and physicians) to

ensure the delivery of safe, ethical, cost effective and quality patient care. Professional nurses work to the full scope of their discipline and seek guidance when aspects of care are beyond their scope or experience; and although the scope of practice for many nurses overlaps, in certain situations the knowledge, skill, and judgment required may be unique to one type of nurse (Registered Psychiatric Nurses Association of Saskatchewan, Saskatchewan Association of Licensed Practical Nurses and Saskatchewan Registered Nurses Association, 2000). In other words, the type of nursing interventions and the patient's care needs will determine which nurse is most appropriate for care delivery. If a patient is requiring complex care due to unpredictable needs, an RN will generally be the most appropriate choice of care giver (Registered Psychiatric Nurses Association of Saskatchewan, Saskatchewan Association of Licensed Practical Nurses and Saskatchewan Registered Nurses Association, 2000). Because of the potential difference in knowledge, skill or judgment an essential role for RNs in collaborative situations is that of assignment and delegation of nursing care. RNs are responsible for determining when patient care should be assigned or delegated to other nurses or unlicensed nursing staff to ensure quality patient care while acknowledging the reality of having other healthcare practitioners working with them toward the same end goal (College of Registered Nurses of Nova Scotia, 2004). If a task falls within another care providers' scope of practice it is called 'assigning', but in certain circumstances it becomes necessary for the RN to 'delegate' tasks on a situational basis that may not be in the delegatee's scope of practice. Delegation should only be done if it is in the patient's best interests, and should not be done for anything that requires the specialized knowledge, skill or judgment of a registered nurse (College of Registered Nurses of Nova Scotia, 2004). For example, if an RN were very busy meeting patient care needs, that RN may delegate taking blood pressures to an unlicensed care provider, but cannot delegate any decision making from

the results of those blood pressure measurements. As a result of the assigning and delegation role, many RNs are intrinsically in leadership or authority positions when working collaboratively to provide patient care.

2.3 Nursing Work Context

Nursing work often takes place within large organizations that include hierarchies, operating rules and limited resources (Maslach, Schaufeli and Leiter, 2001). One such organization is the Saskatoon Health Region (SHR), which is where the data for this thesis were gathered. The Saskatoon Health Region (SHR) is the largest health region in the province of Saskatchewan and it provides hospital, long term care, public health, home care, mental health, addictions, palliative care, and prenatal care services. SHR provides public healthcare and is funded through contributions from the Government; it receives approximately 92.7% of its operating budget from the Ministry of Health. This health region provides services to approximately 318,000 local residents and employs approximately 929 physicians and 13, 458 registered nurses and other healthcare workers. There are ten hospitals in this health region, three of which are located in the city of Saskatoon (Saskatoon Health Region, 2013).

2.4 Organizational Culture

Research suggests that organizational culture plays a role in determining how work environments affect healthcare providers and the patient care they deliver. Hospital organizations are taking on team approaches to healthcare as part of their culture because of the specialization of healthcare workers, which has led to a workforce of interdependent professionals with tight timelines, but has yet to consider that they have all been socialized pre-employment to have strong professional identities (i.e. nurse, doctor, and therapist). Coincidentally, literature suggests that socialization during preparatory education can cause barriers to effective communication in

collaborative settings (i.e. taught hierarchical expectations limiting input from other professionals), in turn affecting the services delivered in organization.; signifying a need for employees to be specifically socialized to the culture of their organization (Le Blanc, Schaufeli, Salanova, Llorens and Nap, 2010).

The term ‘organizational culture’ refers to shared characteristics among people in the same organization; and those characteristics can be beliefs, values, norms of behavior, routines, traditions and sense making (Parmelli, Flodgren, Schaafsma, Baillie, Beyer and Eccles, 2011). The Saskatoon Health Region has outlined on its web site its vision, mission, values, promise and strategic directions as a means of indicating the direction the organization and its employees are to strive for in terms of delivering services (SHR’s vision is “Healthiest People, Healthiest Communities, Exceptional Service”; its mission is to “improve health through excellence and innovation in service, education and research, building on the strengths of our people and partnerships” (Saskatoon Health Region, 2013); SHR’s values are respect, compassion, excellence, stewardship, and collaboration; SHR’s promise is that “every moment is an opportunity to create a positive experience in the way [they] treat and care for people, in how [they] work and interact with each other, and in how [they] deliver quality service…”; and the strategic directions involve better health, better care, better teams, and better value) (Saskatoon Health Region, 2013). These statements can be considered the SHR organization’s culture because they are the ‘blue print’ from which the health region’s employees are to direct their work. From the SHR’s statements, it can be understood that the organization and its employees are working toward a more professionally integrated approach to service delivery to improve the quality and value of the services. However, the approaches to tailor the organizational culture to

better fit the healthcare needs of the community it serves are broad, ever adapting and complicated beyond the scope of this thesis.

Another issue related to organizational culture and nursing is that researchers believe that organizations can have more than one culture or and that these subcultures develop their own systems to understand and cope with problems (Sleutel, 2000). Considering that the three hospitals in the city of Saskatoon are composed of various nursing units from which patient care for individuals of differing health statuses (specialties) is undertaken, it is not unreasonable to suggest that each nursing unit experiences unique problems to which they must adapt, so it may be possible that nursing units have created subcultures revolving about their nursing specialties. This idea makes the inter-related concepts of nursing culture and organizational culture slightly muddled in interpretation of the expectations for nursing employees. Nonetheless, it can be understood that at this time the nursing profession is a culture embedded within a unit and organizational culture; as such a theoretical framework that considers culture and how it affects personal and social interaction in a work environment is necessary to guide the thought process of this thesis.

2.5 Theoretical Framework

Theoretical frameworks guide the researcher by suggesting a format from which to view the intended research, a guide for determining what study variables will be of interest and even assisting in the interpretation of research results (Current Nursing, 2010). Essentially a theoretical framework provides a perspective from which the collected data may be understood. Two theoretical models guided the conception and conduct of this study: the conservation model proposed by Myra Levine, which views nursing as a holistic process involving interactions in the environment (Wills, 2007), and the conservation of resources theory proposed by Hobfoll

(2001), which is more general in its application but also described interactions with the environment.

2.5.1 Levine's Conservation Model. The conservation model was proposed by Myra Levine in 1973 as a way to view the interactions between nurses and patients (Wills, 2007). This model viewed individuals as active participants who interacted with and sought information from the environment through their sensory organs. This model assumed that nurses provided patient centered care within a reality of common experience, but nurses provided specific interventions for each individual patient.

The conservation model is based in the belief that the nurse creates the environment in which a patient is to heal by conserving the patient's energy through nursing interventions, conserving or restoring the patient's structural integrity by promoting healing, conserving the patient's sense of identity, and by conserving the patient's social integrity by facilitating and maintaining relationships. Essentially, the nurse decides on interventions that permit the individual to participate in, or adapt to, their social system in such a way that there is energy homeostasis, or a balance between the energy a patient spends on both the external and internal environments and the patient's total available energy, as a way to promote holistic health (Wills, 2007). This model is a useful framework from which to direct holistic patient care in that it identifies that energy must be spent within social interactions between nurses and patients to promote health. Levine speculated that the conservation of a patient's energies leads to positive perception of the care received, and was linked to perceptions of quality patient care delivery. However, this model discussed nursing only in relation to the care nurses provide the patient and not in terms of how the nurse actually exists in the setting.

The present study did not use Levine's model, while it does speak to the issues, Levine's model does not address the origins of the nurse's energy and how the nurse conserved personal energies while assisting patients to heal, so could not provide insight into how the nurse perceived the work environment. However, Hobfoll's conservation of resources theory followed the same premise of conserving for an individual's wellbeing, while focusing on the employee.

2.5.2 Hobfoll's Conservation of Resources (COR) Theory. In the literature, the Conservation of Resources (COR) theory proposed by Hobfoll (2001), is one of the more prevalent theoretical tools used to predict and explain occupational stress. An illustration of the model can be found in Appendix A. This theory is popular as it emphasizes the objective and culturally derived contexts of the work environment in explaining the stress process, versus relying solely on individual appraisals of the context. The COR theory considers both environmental and internal processes relatively equal because this theory views the individual as 'nested' within a community's social context. Further, stress is considered an internal state that focuses partly on the individual's perception of stressors or environmental demands, but also states that those perceptions are socially-common and reality-based among the culture of the community to which the individual belongs. As such, the perceptions and related behaviours are shared in principle by the group, and the individual experiences stress in terms of what the consequences mean based on the community's culture (Hobfoll, 2001).

The COR theory was based in the premise that people were primed biologically, socially, cognitively, and culturally to pay attention to current, past and future challenges that they view as central to their world and internal experience (Hobfoll, 2010). This theory revolved around the idea that "individuals [strived] to obtain, retain, protect, and foster those things that they value" (Hobfoll, 2001, p. 341). For the individual to do this, they must view situations in the social

world as threatening to the self, and requiring the use of resources to adapt and survive (i.e. to be resilient).

The first of this theory's three principles stated that resource loss was disproportionately more important than resource gain. The second principle stated that people needed to invest in resources to protect against resource loss, recover from lost resources, and to gain resources. A precondition for this principle was an understanding that "as people [developed] they ideally [were] offered circumstances that [shared] resources with them, imbue them with resources, and teach them how to foster and maintain resources" (Hobfoll, 2010, p. 129) so that they would have a collection or 'caravan' of available resources should challenges arise. People with more resources would be less vulnerable to resource loss and more capable of gaining resources, and as such may be more resilient in time of stress. However, initial loss could lead to future loss, and loss cycles could be more influential and go faster than resource gaining cycles. The third principle stated that even though resource loss was more important than resource gain, the importance of gaining resources increased in situations of loss. For this reason, processes to gain resources would increase to minimize the effects of loss, and resiliency could occur when small resource gains gave the person hope to pursue other efforts (Hobfoll, 2010).

Hobfoll postulated that individuals had a finite amount of available resources and that work environments placed demands on those limited resources. Resources could include object resources (i.e. car, house), condition resources (i.e. employment, marriage), energy resources (i.e. credit, knowledge) and personal resources (i.e. self-esteem, skills). Essentially, a cycle existed between resources that were used and resources that were replenished. Individuals conserved their resources to gain other resources and to prevent resource loss, which enabled successful adaptation to the environment. Successful adaptation, or resiliency, could make

further resources available, but the stress process of using resources to adapt to the work environment left individuals vulnerable to further stressors and could result in further loss of resources. Unsuccessful adaptation occurred when an individual encountered chronic resource loss leading to negative emotional and functional outcomes and decreased resource investment in the work environment, essentially intensifying distress and depleting the individual's resource reservoir (Hobfoll, 2001).

The above ideas relate back to nursing through research done by Van den Tooren and De Jonge (2008). These researchers investigated how well different kinds of job resources ameliorated job stress in nurses. They subscribed to the Demand-Induced Strain Compensation model (developed by De Jonge and Dormann, 2003 and 2006) wherein it was proposed that health and well-being of human service professionals could be explained by job demands (which required sustained effort) and job resources (which act as energy reservoirs to be used for coping with job demands) of cognitive, emotional or physical origins. The results of this study indicated that high physical demands were significantly related to physical complaints and emotional exhaustion, unless the individual also had high physical job resources. Results also showed that if an individual had high emotional resources, physical demands would not be related to emotional exhaustion. Thus, this study indicated that the type of job resources (cognitive, emotional, or physical) must be equivalent to job demands in order to prevent or buffer job stress in nursing. Lavoie-Tremblay, Trepanier, Fernet and Bonneville-Roussey (2013) also suggested that matching the type of resource to the type of demand experienced would be the most effective way to protect nurses from strain at work.

Similarly, research by Kammeyer-Mueller, Simon and Judge (2013) completed a 10 day study using 133 Registered nurses who worked full time hours in Florida Hospitals. The researchers utilized COR theory and self-determining theories to form their hypotheses and understand their results. These researchers viewed neuroticism as a personality disposition wherein a person is very aware of potential resource stressors in their environments and as such is hyper-reactive to stressors they experience, hypothesizing that the more neurotic the individual the greater emotional exhaustion pre and post work (i.e. being low in neuroticism could be viewed as a resource). The researchers also hypothesized that being internally motivated (when a person works because of interest or pleasure attained from the work) to perform tasks at work could be viewed as a valuable resource that would give the individual satisfaction and decrease emotional exhaustion. In contrast, extrinsically motivated individuals who expend their personal resources to gain extrinsic consequences (like money, prestige and expectations of others) at work and would feel more emotional exhaustion as their resources were not being restored through work. This study consisted of an initial survey that asked the participants to answer questions on likert scales that related to measurements of neuroticism and motivation (intrinsic or extrinsic). Then the researchers asked participants to fill out brief surveys pre and post work for ten days that asked them questions related to emotional exhaustion. Overall, their results indicated that personality and motivation type moderated the effects of pre-work emotional exhaustion on post-work emotional exhaustion. To this end, the researchers found that neurotic individuals had high levels of emotional exhaustion after work regardless of pre-work exhaustion levels; that intrinsically motivated nurses were less likely to be emotionally exhausted, but that they were more likely to be exhausted after work if they were exhausted pre-work; and that individuals who were more extrinsically motivated were more affected by pre-work levels of

emotional exhaustion post-work. These results suggested that in terms of the COR theory, that the more neurotic a nurse was in regards to personal resources the more emotional strain they would report because they could be more affected by the resource losses; and that intrinsic motivation could be viewed as a resources that alleviated the effects of work stressors on resources.

In summation, it was not a new revelation that healthcare is a stressful profession and that stress coping strategies must be improved in an attempt to reduce occupational stress and promote quality work environments. McVicar (2003) suggested that there are six main areas of stress in the nursing work environment: workload, leadership/management issues, professional conflict, emotional demands of caring, shift work, and patient needs. Considering the many routes for stress, creating a better understanding of how professional nursing stress could be mediated by way of occupational environment could prove to be a prudent plan of action in terms of employee retention and recruitment. As such, this study utilized the COR theory as theoretical framework because it enabled the researcher to view recognition and job satisfaction as resources within a social context that may have a buffering effect on occupational stress experienced by nurses.

2.6 Literature Search Methodology

A literature search was performed using electronic databases available from the University of Saskatchewan library. Scopus, PsycINFO, CINAHL, Google Scholar, and the library catalogue were used to search for single and paired key words such as ‘job satisfaction’, ‘recognition/work recognition’, ‘stress/distress’, ‘work environment’, and ‘quality patient care’. The search was limited to journal articles written in English, published between the years of 2000 to 2013, and focused on articles from peer-reviewed research. Interestingly, there seemed to be a scarcity of

Canadian literature, potentially indicating that this topic is a new area of interest for Canadian healthcare. This literature review will discuss the state of the literature related to the work environment of nurses, particularly in relation to perceived occupational distress, workplace recognition and job satisfaction.

2.6.1 Occupational Distress

According to the 2003 Canadian Community Health Survey, healthcare is considered a stressful occupation; nearly one in three employed Canadians reported that their work days were 'quite' or 'extremely' stressful. In a comparison of occupations, it was noted that Canadian nurses and physicians reported having the highest stress levels and that stress levels in Canadian healthcare providers has been shown to peak between the ages of 35 to 54 years, with approximately 50% of these workers reporting high work stress (Wilkins, 2007). Further, research by Jones, Wells, Gao, Cassidy and Davie (2013) indicated that perceived levels of control over work is an important aspect of perceptions of stress and job satisfaction, and that nurses reported feeling lower levels of control over their daily work than physicians and allied health professionals.

Interestingly, CIHI (2010) reported that between the years of 2005-2009 the average age of Canadian RNs was 45 years and the average age of Canadian LPNs was 43 years. These findings were significant as unresolved long term stress may lead to a phenomena called 'burnout'; and burnout has become a diagnosable syndrome characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment (Brenninkmeijer, & VanYperen, 2003). Burnout has been reported to have the potential for affecting healthcare professionals individually, and also the care provided to patients, and health organizations as a whole. As such,

research related to occupational stress remains an important area for study when examining quality healthcare.

Occupational stress affects employee morale, safety, and efficiency (Dollard, Winefield & Winefield, 2003). High levels of stress negatively affect physical and psychological well-being of staff leading to increased accidents, increased sick days, and decreased staffing (Josephson, Lindberg, Voss, Alfredsson & Vingard, 2008). Further, high stress levels make work environments undesirable, suggesting that stress plays a role in recruitment and retention of registered nurses (Erenstein, & McCaffrey, 2007; Buffington, Zwink, Fink, DeVine, and Sanders, 2012).

The quality of nursing practice environments and patient safety outcomes has been linked to the experience of professional stress/burnout. Halbesleben and Bowler (2007) proposed that motivation mediated the relationship between job performance and the emotional exhaustion component of burnout. To test this, emotional exhaustion, motivation, and performance were defined as organizational citizenship behaviours that either benefitted the organization or the individual. The results of this study indicated that both environmental and cognitive factors played a role in the etiology of burnout. The researchers suggested that organizational citizenship behaviours that benefitted the organization, such as adhering to informal rules and making an extra effort to help the organization attain its goals, occurred as a result of the employee having positive experiences in the work environment. Alternatively, organizational citizenship behaviours that benefited the individual occurred more often if the employee experienced resource losses, as demonstrated by emotional exhaustion, because the employee would be seeking resources, such as social support or feedback from co-workers, in order to achieve resource 'homeostasis'. This study suggested that higher levels of emotional exhaustion were

related to decreased frequency of thinking about getting work done, which was related to decreased job performance. Higher emotional exhaustion was significantly related to a decreased degree to which an individual strove to be better at performing than co-workers, which decreased organizational citizenship behaviours benefitting the organization. Higher levels of emotional exhaustion were shown to increase the individual's communion-striving (i.e. the degree of excitement in having co-workers who were also friends) and through this increased the organizational citizenship behaviours that benefited the individual. These results indicated a process specific to the emotional exhaustion portion of burnout and alluded to increased emotional support at work as a motivational intervention that organizations could undertake to buffer burnout occurrences and improve job performance through citizenship behaviours. As such, an interesting relationship was postulated between resource gains for the individual and a positive work environment that provided those needed resources; but did not elaborate on what kinds of emotional resources match with who benefits from the resulting organizational citizenship behaviours.

Bakker, Van Emmerik, and Euwema (2006) also studied work environments, but specifically those of Dutch constabulary officers in terms of how burnout/engagement experiences crossed over in work teams. The results of this study indicated that team level burnout or engagement affected individual members' experiences of burnout/engagement, and that individuals' experiences of burnout could be 'contagious' to the team. For example, teams that were characterized as having high levels of burnout were likely to be formed of individuals who developed burnout symptoms. This study supported the idea that the development of burnout primarily occurred within social settings, and as such the development and or persistence of burnout symptoms must be addressed at the team level irrespective of individual differences in

job demands or resources. These results suggested that employees would develop burnout or engagement characteristics depending on how they perceived the reception of their contributions at work as valued or noted by co-workers/superiors. An interesting result in terms of this thesis, in that nurses often work in inter-professional teams and according to the conservation of resources (COR) theory, individuals are 'nested' in a shared social context from which they experience stress and its consequences.

Spence Laschinger and Leiter (2006) discussed the link between negative work conditions and employee stress, burnout, and negative work attitudes and performance. They collected data on Canadian nurses' worklife environment, compared those findings to burnout scores and reported frequencies of adverse patient events. The results suggested that worklife factors (staffing adequacy, strong nursing leadership, nurse/physician collaboration, staff nurse policy involvement, and support of a nursing model of care) could ameliorate burnout and adverse events that occurred through the depersonalization and decreased sense of accomplishment nurses felt at work; suggesting that nurses' perceptions of work environments affected the level of work engagement experienced, and through this affected the quality of care patients received. However their results indicated that emotional exhaustion, a characteristic of burnout, was not significantly associated with adverse patient events, indicating that psychological relationships with work were related to the context of the work place environment where the adverse events were experienced, and not as directly related to the affective properties of the individual. As such, the results showed that the experience of burnout in relation to patient outcomes could be prolonged or remedied through the availability of resources such as recognition of staff values and adequate staffing. Thus, nursing leadership was strongly related to positive working conditions because it provided supportive resources for staff, which inherently supported positive

perceptions of the self and the work environment, leading to higher staff engagement and improved patient outcomes.

2.6.2 Workplace Recognition and Job satisfaction.

Christiansen (2008) interviewed 10 hospital nurses and reported three themes that registered nurses used to describe their recognition of exemplary work. The first theme discussed was seeing to the needs of their patients, wherein Christiansen suggested that the value nurses placed on their care for patients was based on the patients' reactions and care outcomes. The second theme was managing professional responsibilities, in that the nurse felt control over what happened in their work and completing tasks they deemed most important. The third theme was receiving positive feedback from peers, management and doctors. Interestingly, this study indicated that most of the respondents wanted more feedback than they received and that feedback was a part of job satisfaction in that it motivated the nurses and affirmed competence. This research suggested that it was both the ability to provide nursing care in the ways that nurses felt were expected of them, professionally and personally, and being recognized by others who were directly involved or performed similar tasks that gave the nurses satisfaction in what they did daily. Research by Schubert, Glass, Clarke, Aiken, Schaffert-Witvliet, Sloane, and De Gest (2008) also suggested that nurses experienced lower job satisfaction because of rationing or omitting nursing care, related to limited time and resources, as a means of carrying out necessary tasks. In terms of the COR theory, a nurse being able to carry out care in expected ways and being recognized by peers could be an indication of successful adaptation to the work environment.

Similarly, research by Le Blanc et al. (2010) looked at 429 European ICU nurses' responses to a longitudinal questionnaire regarding feelings of efficacy (i.e. the belief in one's ability to

organize and execute actions to bring about specific goals), team commitment (i.e. the feeling of attachment an individual has toward their work team) and collaborative practice (i.e. interactions between nurses and physicians that allow the knowledge and skills of both professions to work synergistically during care delivery). The researchers utilized COR theory wherein they viewed efficacy as a personal resource that may have a role in motivating individuals to invest resources in order to attain further goals, thereby enriching their resource pool. The results of this research indicated that an ICU nurse's perceptions of self-efficacy, team commitment and collaborative practice were all reciprocally related. The researchers suggested that investing in ICU nurses' beliefs of self-efficacy could result in a positive resource spiral by positively affecting team commitment among nurses, which then positively effects perceptions of collaborative practice. Further, feeling more efficacious led the nurses to better identify with their work and peers, which then improved the quality of relationships in the healthcare team which continued to improved feelings of efficacy (Le Blanc et al., 2010). Considering these findings, it could be suggested that feelings of self-efficacy and team commitment in nurses are related to being recognized for one's skills and knowledge and through this acquiring feelings of satisfaction which could encourage the nurses to develop more meaningful relationships with both their peers and their organization; potentially leading to more effective communication with collaborative team members and more effective patient care.

Research by Abualrub and Al-zaru (2008) examined the relationship between job stress, recognition, job performance, and intention of Jordanian nurses to stay employed where they worked. This research indicated that nurses who reported receiving more recognition for their achievements and their work performance perceived less job stress, that there was a negative relationship between job stress and intention to stay at work; and that there was a positive

relationship between job performance, recognition of performance, and intention to stay. Similarly, Graber et al. (2008) collected data in order to predict morale and burnout levels in health center employees from the USA. The results of this study indicated that staff morale and burnout appeared to be buffered by personal recognition, career promotion, opportunities to develop skills, fair distribution of work, appropriate funding, and enough staffing. These two studies indicated that although resources might be available in a work environment, those that are particularly related to recognition could be most effective in filling the 'resource gap' job demands placed on employees and in turn promote employee retention through decreased stress perception. Recognition could demonstrate that the employee's efforts were noted and valued. Perhaps it was the overt recognition of being valued in relation to positive work environments that gave employees job satisfaction which then influenced intent to stay.

2.7 Conceptual and Operational Variable Definitions

2.7.1 Quality healthcare conceptual definition. This study was done from the nurses' perspective and quality healthcare was loosely defined as the degree to which selected healthcare indicators (i.e. distress, job satisfaction and recognition) met or exceeded the nurses' expectations.

2.7.2 Quality healthcare operational definition. This study was interested in the perspective of nurses and defined quality care as the nurses' overall assessment of quality of care provided to patients on their hospital unit using the standards of 'don't know' to '100', found in section one of the "Managing Quality of Care in Canadian Hospitals" nurses' questionnaire.

2.7.3 Distress conceptual definition. Distress was a representation of symptoms resulting from strain elicited by a stressor, and could also be attributed to the effort that had to be put into dealing with that stressor in order to maintain an acceptable level of psychosocial functioning

(Terluin, Van Rhenen, Schaufeli, and De Haan, 2004). In terms of the COR model, distress could be viewed as the stress process that occurred when an individual experienced resource loss and utilized a strategy anticipated to invest in resources that may or may not gain expected resources (Hobfoll, 2001).

2.7.4 Distress operational definition. This study defined distress as the frequency of stress that nurses reported experiencing in their work over time as measured by section five, 'stress in your work', of the 'Managing Quality in Canadian Hospitals' nurses' questionnaire.

2.7.5 Recognition conceptual definition. According to COR theory, resources were objects, conditions, personal characteristics and energies that were valued by an individual because they facilitated achievement of resources and protected attained resources (Hobfoll, 2001). This study viewed recognition as a resource that the individual strategized to receive from their work environment by investing in activities or behaviours that were beneficial to the work environment. In this thesis, recognition is suggested as a resource that assists individuals to successfully cope with work environment stressors, and that it has the potential to lead to secondary gains, such as increased self-esteem or a sense of accomplishment.

2.7.6 Recognition operational definition. Recognition was defined by the degree to which nurses perceived fairness for their exchange of inputs for rewards in regard to financial compensation, aspects that the nurse found interesting/personally gratifying parts of work, and appreciation/respect/acknowledgement for work done. Recognition was measured using section six, 'Professional Equity', of the 'Managing Quality in Canadian Hospitals' nurses' questionnaire.

2.7.7 Job satisfaction conceptual definition. Adams and Bond (2000) defined job satisfaction as 'the degree of positive affect towards a job or its components' (p.537) such as the

individual, the job or the work environment that an individual experiences. In terms of the COR theory, job satisfaction could occur when an individual had invested personal resources and had attained significant resources to act as buffers to future resource losses at work, perhaps indicating successful adaptation to the environment (Hobfoll, 2001).

2.7.8 Job satisfaction operational definition. This study defined job satisfaction as the amount of experienced satisfaction or happiness a nurse reported with personal and performance aspects of their career. Job satisfaction was measured using section seven, 'Satisfaction', of the "Managing Quality of Care in Canadian Hospitals" nurses' questionnaire.

2.8 Research Questions

The main research question in this study was how is the perceived work environment related to quality healthcare? More specifically, this study was looking into nurses' perceptions and was interested in:

1. What relationship(s) might exist between perceptions of the quality of care provided and stress, recognition, and job satisfaction experienced at work?
2. Is there was a difference between registered nurses (RN) and licensed practical nurses (LPN) in terms of how they perceived quality care, stress, recognition, and job satisfaction.
3. In terms of the COR theory, do perceptions of recognition and job satisfaction serve as indirect indicators of quality by mediating distress levels?

Chapter 3 Methodology

This thesis is a descriptive secondary analysis on quantitative data gathered by the MERCURi group for their 'Managing Quality in Canadian Hospitals' study. A descriptive study is concerned with describing the distribution of existing variables, it is used to identify trends, but not causal relationships, between gathered data with the intention of creating hypotheses from which future research can be based (Grimes &Schulz, 2002). Secondary analysis is defined as the analysis of data collected by another researcher, which is often done for a different purpose than the original study, and primarily focused on data from surveys and censuses (Lewis-Beck, Bryman, & Liao, 2004). It is important to note that in secondary data analysis, the secondary researcher has no opportunity to influence the questions asked or the methods used to code the primary data set, as such the secondary researcher 're-contextualizes' the data in search of any generalizable relationships in the population studied. To this end, this thesis adds to the discussion of quality healthcare from the perspective of nurses by examining the primary data from the 'Managing Quality in Canadian Hospitals' study. Specifically, this thesis was interested in the relationship between nurses' work place distress and quality perceptions. Using the COR theory, nurses' work recognition and job satisfaction perceptions were also explored as indicators of distress and indirectly as indicators of quality, because they were viewed as potential resources that mediate the stress process.

3.1 MERCURi Research Group: Primary Study

The MERCURi research groups' 'Managing Quality in Canadian Hospitals' (the official Canadian Institutes of Health Research title for this project was 'Convergence or Divergence in Perspectives on Quality') was a large project that sought to bring together quality insights from the study of health systems and hospitals (Lepnurm, Backman, Dobson, Keegan, Lockhart,

Sicotte & Stamler, 2007). The study examined patients with one of four tracer conditions (CVA, MI, hysterectomy and prostate disease) and the staff associated with these patients in one health region in Saskatchewan. Mixed methods were used to portray the perspectives of patients, nurses, physicians, administration, and other staff in terms of quality. The project hypothesized that "health systems which are more successful in terms of: attainment of quality goals; and capacity to develop values which respond to the needs of their communities, will deliver higher quality services in all of the hospitals within their system" and proposed that "structuring tasks, work culture, deployment of resources, and provider morale, [were all factors that] affect quality (Lepnurm et al., 2007, p. 12a). The mixed methods included questionnaires and focus groups; the nurses' questionnaire can be located in Appendix B. The project gathered baseline data, executed knowledge translation with interventions where able, and provided follow-up data to participants.

The results of the primary study indicated that the quality ratings of healthcare providers were significantly related to: "technical and staff capabilities, the way work [was] organized, levels of distress, sense of accomplishment of providers of care, recognition by patients, administrators and colleagues, satisfaction with performance of duties and organizational culture" (Lepnurm, 2008). Two publications relating back to this original questionnaire research were located. The first publication by Lepnurm, Voigts, Lissel, Dobson and Stamler (2012) discussed the capability of a patient satisfaction questionnaire in capturing important factors that related to their perceptions of quality of care delivery. The results of this study indicated that overall patients reported that the quality of their care was very good and that patient prognosis was significantly and positively related to assessments of quality. Further, the research indicated that patient observations of efficiency, attentiveness and tidiness were of less importance when rating quality

of care and that the quality of care provided by nurses then doctors were the most important factors in the patients' overall assessment of care delivery (Lepnurm, Voigts, Lissel, Dobson and Stamler, 2012).

The second publication by Lepnurm, Dobson, Stamler, Persaud, Keegan and Brownbridge, (2012) discussed nurses' perceptions of their work environments and how they related to their perceptions of quality patient care delivery. Specifically, this publication was interested in the effect that structures and processes of quality, management, and organizational culture had on the quality of care given to patients in Saskatoon hospitals. The participants in this research were registered nurses working on six nursing wards and nine flow-through nursing units (i.e. emergency rooms, operating rooms, and pre-assessment and post-anesthesia care units). The results of this research indicated that nurses from the nursing wards and the flow-through units reported quality of care to be of a similar level and that there was room for improvement across the wards and even more room for improvement in the flow-through units.

The results also indicated that organizing for quality and activities to ensure quality significantly affected ratings of quality of care on the nursing wards but not on the flow-through units. The work culture (standards and advancement) was reported to significantly affect the reporting of quality on the flow-through units and nursing wards. Professional equity sub-scales (i.e. financial, fulfillment, and recognition) were found to significantly affect quality ratings; however, these scales indicated that there were low scores for the three equity areas for both nursing work environments. Further, supervision and leadership were found to significantly affect ratings of quality for both the flow-through units and the nursing wards; although, leadership support ratings were significantly lower on the nursing wards than the flow-through units. Overall this research indicated that nurses' reports of quality of patient care were

significantly correlated with work environment measures, and that nurses viewed quality on both an input (i.e. capabilities of staff, functioning of equipment, and suitability of the physical facilities) and organizational level (i.e. unit organization and activities done to ensure quality, work culture orientation to standards and career advancement, leadership/supervision). However, there were reported differences in how work environment measures were perceived on nursing units and flow-through nursing units, potentially indicating that there remains a need for strategically managing healthcare system resources (Lepnurm, Dobson, Stamler, Persaud, Keegan and Brownbridge, 2012).

3.1.1 Primary study sample. The participants were full-time and part-time nursing staff; both registered nurses (RN) and licensed practical nurses (LPNs). The nurses who participated in the questionnaire portion of this project were all RNs and LPNs who had sufficient experience on the nursing unit according to the judgment of the manager of nursing of each particular medical and surgical nursing unit.

The MERCURi groups' chief research officer attained a list of nurses from the people strategies department, this list of names was taken to the respective hospital unit manager. The unit manager was asked to add the names of any nurses who may not be on the list and to determine which nurses would have an understanding of the unit and how it worked at that time. As such, only nurses who were thought by the manager to have been working on the unit long enough to fully understand the unit and its daily functioning were asked to participate in the questionnaire.

3.1.2 Primary study procedure. During the "Managing Quality in Canadian Hospitals" project, a nurses' questionnaire package was distributed to 18 hospital units in the Saskatoon Health Region. Six units were selected where patients stayed for a longer period of time

receiving nursing care (i.e. gynecology and cardiology units) as compared to the other 12 flow-through nursing units (i.e. emergency and operating units). Only the data from the six patient-care units were used in this thesis. The questionnaire package given to the participants contained a letter discussing anonymity and assumed consent if the questionnaire was completed and returned, a summary letter of the larger research project with contact numbers, the nurses' questionnaire, a return envelope, letter with a consent form inviting the nurse to participate in a focus group, and a promotional pencil. Further, all nurses' questionnaires were coded by the chief research officer with identification numbers.

Questionnaire packages were distributed by the chief research officer to the participants' work place mail boxes. Questionnaires were left in the mailboxes on the hospital units for approximately eight weeks. Participants were encouraged to complete the questionnaire, seal it in the provided envelope, and either drop it off in a locked box left in their staff room or to use the pre-addressed envelope in their package and send it via internal mail. The nursing units were offered a predetermined monetary incentive (to be used for education) based on the questionnaire response rate of the nursing unit. The locked boxes were emptied at various intervals and response progress was communicated via a poster attached to the locked box.

Demographic variables used for this research are found in section 14 of the "Managing Quality in Canadian Hospitals" nurses' questionnaire. The demographics of interest included: nursing education, nursing certification/credentials, age, sex, and years of practice.

3.1.3 Primary study instruments. The quantitative questionnaire instruments used for secondary analysis in this thesis were originally developed for use in the "Managing Quality in Canadian Hospitals" nurses' questionnaire. The questionnaire consisted of several self-report data gathering tools. However, the secondary study was only concerned with an overall quality

scale and three measures that were capable of contributing to the dimensions of provider morale: ‘stress in your work’ (distress), ‘professional equity’ (work recognition) and ‘career satisfaction’ (job satisfaction).

3.1.3.1 Quality. Before answering any of the tools in the “Managing Quality in Canadian Hospitals” nurses’ questionnaire, nurses were asked to rate their overall perception of quality of care provided to patients on their nursing unit. This item was on a scale that ranged from: ‘don’t know’, 0 = ‘non-functional’, 10 - 40 = ‘terrible or poor’, 50 - 60 = ‘passable or adequate’, 70 -90 = ‘good or excellent’, and 100 = ‘perfect’.

3.1.3.2 Distress. Distress was measured using the ‘Stress in your work’ scale from the “Managing Quality in Canadian Hospitals” nurses’ questionnaire. This section of the questionnaire was adapted from the 13 item “Daily Distress” measure developed by Lepnurm, Lockhart and Keegan (2009). The items in this measure were scored on a seven point Likert scale (1 = never, 2 = a few times yearly, 3 = once monthly, 4 = two to three times monthly, 5 = once weekly, 6 = two to three times weekly, 7 = daily). This measure viewed lower levels of stress as ‘strain’, moderate levels of stress as ‘stress’, and severe levels of stress as ‘burnout’.

For the purposes of the “Managing Quality in Canadian Hospitals” nurses’ questionnaire, the original distress measure was adapted in wording to better represent a nursing perspective, and the measure was expanded to 16 items with an additional global item inquiring about overall level of health (which was rated on a five point scale ranging from ‘very low’ to ‘ very high’). The additional items inquired about feeling able to concentrate on the tasks that should be done, doing tasks that were outside of job responsibilities and feeling confident in abilities to provide a high standard of care. The reliability and validity of this measure was tested by the MERCURi group’s chief research officer prior to the data collection for the questionnaire data that were

used for the present study. To do this there were 113 questionnaires completed by nurses. The 16 items were placed in an inter-item correlation matrix and the reliability based on standardized items was found to be $\alpha = 0.853$; and then the overall stress measure was correlated with the "How would you rate your level of stress?" question resulting in a linear relationship of $r = 0.509$.

3.1.3.3 Recognition. Recognition was measured using the 'Professional Equity' scale which was originally tested using Canadian doctors in clinical practice and was modified for use in the "Managing Quality in Canadian Hospitals" nurses' questionnaire. The original scale asked questions related to feeling fulfillment and recognition at work and was developed by Dobson, Lepnurm and Struening (2005) to assess different aspects of professional equity and the fairness of exchange of input and rewards in Physicians. The original scale had 15 equity items related to financial equity, intrinsic equity and recognition equity. This tool was measured on six point scales: the fulfillment component ranged from 'very low' = 1 to 'very high' = 6, the financial rewards component ranged from 'not at all' = 1 to 'perfectly' = 6, and the recognition component ranged from 'strongly disagree' = 1 to 'strongly agree' = 6.

For the purposes of the "Managing Quality in Canadian Hospitals" nurses' questionnaire, the professional equity measure by Dobson, Lepnurm and Struening (2005) was adapted in wording to better represent the nursing perspective and a sixth item was added to the recognition subscale inquiring about the efforts the nurses had made that led to advances in their nursing careers. Two items in the fulfillment or intrinsic portion of the tool were changed to inquire about opportunities to use advanced clinical skills and the amount of choice over activities that the nurse participated in versus inquiring about the proportion of interesting and uninteresting work. As another adaptation, this measure also included a summative question asking the participants

to rate their overall range of rewards received for the efforts made on a seven point scale ranging from ‘very unfavorable’ to ‘very favorable’.

Of note, the present study was only interested in the ‘recognition’ subscale. The reliability and validity of this modified measure was tested by the MERCURi group’s chief research officer prior to the data collection for the questionnaire data that were used in the present study. To do this 113 nurses’ questionnaires were completed, the 6 ‘recognition’ items were placed in an inter-item correlation matrix and the reliability based on standardized items was found to be α = 0.737; and then the overall recognition index was correlated with the summative question (inquiring about the full range of rewards nurses received for all the contributions they made) resulting in a linear relationship of r = 0.630.

3.1.3.4 Satisfaction. Job satisfaction was measured using the ‘Satisfaction’ scale in the “Managing Quality in Canadian Hospitals” nurses’ questionnaire, which asked questions related to the degree of satisfaction nurses felt with their career. This scale was adapted from a measure developed by Lepnurm, Danielson, Dobson, and Keegan (2006) wherein they measured career satisfaction in physicians. This measure had one global item and 16-items that were composed of four satisfaction dimensions: personal, professional, performance, and inherent. This scale was measured on a six point Likert scale ranging from ‘very dissatisfied’ = 1 to ‘very satisfied’ = 6.

For the purposes of the “Managing Quality in Canadian Hospitals” nurses’ questionnaire, the above satisfaction measure was shortened to nine items; eight that encompassed the personal and performance dimensions and the previous global item. The reliability and validity of this measure were tested by the MERCURi group’s chief research officer prior to the data collection for the questionnaire data. To do this, 113 nurses’ questionnaires were completed, the 8 items were placed in an inter-item correlation matrix and the reliability was found to be α = 0.844; and

then the global career satisfaction measure was correlated with the satisfaction index to determine that there was a linear relationship of $r = 0.779$.

3.1.4 Primary study ethical considerations. Prior to data collection for the "Managing Quality in Canadian Hospitals" project, ethics approval was achieved from the University of Saskatchewan and the Saskatoon Health Region (Reference number 07-197). The MERCURi group used an introductory letter to inform participants of their voluntary participation and the purposes of the questionnaires. The MERCURi research group will continue to ethically house the data; and will ethically dispose of the data when research has been completed.

3.2 Quality Healthcare from the Nurses' Perspective: Secondary Study

This thesis, 'Quality healthcare from the nurses' perspective', performed a secondary analysis of data gathered from the 'Managing Quality in Canadian Hospitals' study done by the MERCURi group. This thesis adds to the discussion of quality healthcare from the perspective of nurses by examining the relationship between nurses' perceptions of quality of patient care delivery, work place distress, work recognition and job satisfaction.

3.2.1 Secondary study ethical considerations. An application to achieve a certificate of exemption for secondary analysis of part of the "Striving and Thriving in Nursing: Nurse's Survey" data (gathered by the MERCURi group) was submitted to the institutional review board at the University of Saskatchewan. The University of Saskatchewan Behavioural Research Ethics Board found this study to be ethically acceptable (BEH reference number 12-58). Once ethics approval was achieved for this study the data were handled with respect and confidentiality. The data were made accessible by permission from the 'Managing Quality in Canadian Hospitals' chief research officer and remained secure per the MERCURi group research officer's standards.

3.2.2 Secondary study sample. Demographic data from the nurses' questionnaire were analyzed using descriptive statistics. Demographic data included: age, nursing education, nursing credentials, sex, and years of practice. For this study 142 nurses responded to the questionnaire, the majority of the demographic questions were answered by all participants; of the responses received only four nurses failed to indicate their age and six failed to indicate the number of years they had been in practice.

The participants ranged in age from 21-61 years and 58.5% (n = 83) of respondents were 41 years of age or greater (Table 3.2.1). Of these respondents 130 were female and 12 were male. In terms of education, the participants reported training from various provinces and educational institutes; however this section of the questionnaire did not have standard responses to choose from so few reported having the same educational background. In terms of nursing credentials, there were 84 registered nurses and 58 licensed practical nurses. The data were divided by credentials and then broken into reported educational backgrounds. There were 43 of 84 RNs (approximately 51%) who reported "NEPS", "Degree" or "BsN" in the nursing education section of the questionnaire, these nurses were understood to have a university degree. The participants

reported that they practiced on six different nursing units: Unit 1 (n = 30, 21.1%), Unit 2 (n = 37, 26.1%), Unit 3 (n = 11, 7.7%), Unit 4 (n = 22, 15.5%), Unit 5 (n = 19, 13.4%), and Unit 6 (n = 23, 16.2%). The number of years in practice ranged from one year to 43 and 44.4% (n = 63) of respondents reported working 1 to 10 years (Table 3.2.2).

Table 3.2.1 ***Age of Participants***

	Age Range	n	%
	20 to 30	34	23.9
	31 to 40	21	14.8
	41 to 50	45	31.7
	51 to 60	33	23.2
	61 to 70	5	3.5
Missing	System	4	2.8
Total		142	100.0

Table 3.2.2 ***Years of Nursing Practice***

Years of Practice		n	%
	1 to 10	63	44.4
	11 to 20	21	14.8
	21 to 30	35	24.6
	31 to 40	15	10.6
	41 to 50	2	1.4
	Total	136	95.8
Missing	System	6	4.2
Total		142	100.0

3.2.3 Secondary study procedure. This study used a global quality of care rating scale and the distress, recognition and job satisfaction scales that were a part of the previously discussed nurses' questionnaire in the primary study. All data were analyzed using a computer program

called ‘Statistical Package for the Social Sciences’ (SPSS), version 20. The six nursing units studied were assigned a number of one through six for confidentiality purposes.

3.2.3.1 Quality. The mean of the overall quality rating from section one of the nurses’ questionnaire was calculated for all participating nurses, then for RNs and LPNs separately and finally for each of the six nursing units involved in this study.

3.2.3.2 Distress. The Distress scale was scored for each participant. The scale was scored from one to seven (i.e. 1 = never, 2 = a few times a year, 3 = once a month, 4 = 2-3 times a month, 5 = once a week, 6 = 2-3 times a week, and 7 = everyday) for all items except six (items 1, 5, 7, 15, 16 were reverse coded then scored). Higher numbers indicated greater frequency of experienced stress. The mode for each of the 16 items was calculated to indicate which responses were most frequently reported. The summative distress question was also coded (i.e. 1 = very low, 2 = low, 3 = moderate, 4 = high, 5 = very high) wherein higher numbers indicated greater stress perception; a mean was calculated for the summative question for all nurses, RNs and LPNs separately, and for each of the six nursing units.

3.2.3.3 Recognition. The recognition scale responses were coded wherein higher numbers indicated more perceived recognition (i.e. 1 = strongly disagree, 2 = disagree, 3 = disagree slightly, 4 = agree slightly, 5 = agree, and 6 = strongly agree). The mode of each item of the recognition scale was calculated. The summative equity item was coded and scored wherein higher numbers indicated greater perceptions of balance of rewards for contributions at work (i.e. 1 = very unfavourable, 2 = unfavourable, 3 = somewhat unfavourable, 4 = fair, 5 = somewhat favourable, 6 = favourable, and 7 = very favourable). The mean and mode of the summative question were calculated for the whole participant group, the RNs and LPNs separately, and for all six nursing units.

3.2.3.4 Satisfaction. The Satisfaction scale was coded and scored (i.e. 1 = very dissatisfied, 2 = dissatisfied, 3 = somewhat dissatisfied, 4 = somewhat satisfied, 5 = satisfied, 6 = very satisfied, 7 = very satisfied). The mean and mode for all eight items were calculated. The global item (item 9) was also scored and the mean and mode were calculated for the whole participant group, RNs and LPNs separately, and for the six nursing units.

3.2.4 Secondary Study Analysis. The purpose of this study was to explore how nurses' perceptions of distress, work place recognition, and job satisfaction influenced their assessment of quality care in Saskatoon hospitals. The objectives of this thesis were to determine if (1) relationships existed between quality, distress, recognition and job satisfaction; (2) nursing credentials (i.e. RN or LPN) differed in their perceptions of quality, distress, recognition, and job satisfaction; and (3) there was a difference in how the nursing units perceived quality, distress, recognition and job satisfaction.

In the literature, non-parametric statistics are encouraged when parametric assumptions about study samples are violated. Parametric assumptions include: the sample being drawn from a normally distributed population and approximately resembling a normal distribution, the sample consisting of independent observations, the values being on an interval or ratio measurement scale, the populations studied having approximately equal variance, and the sample being adequately large (i.e. $n > 30$) (Corder and Forman, 2009). The data gathered for this research was drawn from a sample of volunteer participants and histograms suggested that the sample was approximately normally distributed across the studied variables (Appendix C), the data consisted of independent observations, and the sample size was greater than 30 unless divided by nursing units and credentials. The data gathered was by definition measured on ordinal and nominal scales (ordinal scale data are defined as values that occur in an order but the distance between

any of the values hold no meaning; nominal scale data are defined as variables that have no particular order and are often categorical (Corder and Foreman, 2009)). However, because Likert scales were used in the questionnaire, where the distance between the items of the scale can be considered equal appearing, the collected data can be treated as interval data wherein means are meaningful results (Nunnally, 1978). Levene's tests for equality of variances indicated that the groups in this study showed a significant difference in variance in regards to quality perceptions of RNs and LPNs, and when the data set was split by nursing units it indicated a significant difference in variance in how RNs and LPNs perceived quality and stress on certain units. However in all other instances, there were no significant differences in variance (Appendixes D, E, and F). Subsequently, the scales used to collect the data can be treated as both ordinal and interval, as such parametric (i.e. sums and means) and non-parametric statistics were appropriate to analyze the data. Non-parametric statistics, when compared to parametric statistics, have less power because they rely on fewer assumptions, but this also makes them more robust (Kitchen, 2009).

Spearman's correlations were done to determine if relationships existed between the variables. The Kruskal-Wallis H-Test, the non-parametric equivalent to the one-way analysis of variance (a.k.a. ANOVA) (Green and Salkind, 2003), was used to compare the six participating nursing units to determine if they differed in their perceptions of the variables. The Mann-Whitney U-test, the non-parametric equivalent to the independent t-test (Laerd Statistics, 2012), was used to compare the two nursing credentials to determine if they differed in their perceptions of quality, stress, recognition and job satisfaction.

3.2.4.1 Spearman's correlation. The Spearman rank correlation, a statistical test used to describe the relationship between two ordinal variables, or one ordinal and one numerical

variable, was used in this study. The Spearman rho (r_s) ranges from + 1 to - 1, wherein each value indicates a perfect correlation and the direction of that relationship (Fink, 1995). The null hypothesis in this study was that there was no relationship between the variables (quality, distress, recognition and job satisfaction), and the alternative hypothesis was that there is a relationship between the variables. The 'rare zone' was set at $\alpha = 0.05$, using a two-tailed test (i.e. 2.5 % of rare zone at each end), and if the r_s fell within the rare zone the null hypothesis was rejected (Corty, 2007).

Spearman rank correlations were used to test the relationships between:

a) The overall quality rating and the overall stress rating.
b) The overall quality rating and the summative recognition item.
c) The overall quality rating and the global satisfaction item.
d) The overall stress rating and the overall recognition item.
e) The overall distress rating and the global satisfaction item.

3.2.4.2 Kruskal-Wallis H-test. The Kruskal-Wallis H-test was used to compare the means of the six nursing units to see if there was a difference among the type of nursing unit and their perceptions of quality, distress, recognition, and satisfaction. This test asked whether there was a difference between the medians of unrelated groups (must be more than three) by comparing the ranking of the groups (Plichta and Garzon, 2009). The null hypothesis was that there was no difference in the nursing units' medians and the alternative hypothesis was that not all the units' medians were equal. To determine if the H value was significant, a α-level of 0.05 was used.

3.2.4.3 Mann-Whitney U-test. A Mann-Whitney U-Test compared two groups by means (i.e. RN and LPN) to see if they differed on some level (note: nursing units three and four did not have LPNs and could not be a part of the U-test). To determine if there was a significant

difference in perceptions of RNs and LPNs, two-tailed tests were done with a 'rare zone' of α = 0.05 (Corty, 2007). The tests looked at the quality mean, distress mean, recognition (equity) mean, and satisfaction mean for both the RNs and LPNs. The null hypothesis for each test was $\mu RN = \mu LPN$ and the alternative hypothesis was $\mu RN \neq \mu LPN$. The calculated Z-score was used to compare the results for significance. Results were considered statistically significant if the p-value ≤ 0.05, $Z = +/- 1.96$ according to the standard normal distribution (Plichta and Garzon, 2009).

Chapter 4 Results

This chapter presents the descriptive findings from the secondary study's analysis of a subset of questionnaire data gathered from the 'Managing Quality in Canadian Hospitals' nurses' questionnaire. The purpose of this study was to explore how nurses' perceptions of distress, work place recognition, and job satisfaction influenced their assessment of quality care in Saskatoon hospitals. The research questions this study was interested in were:

1. What relationship(s) might exist between perceptions of the quality of care provided and stress, recognition, and job satisfaction experienced at work?
2. Is there was a difference between registered nurses (RN) and licensed practical nurses (LPN) in terms of how they perceived quality care, stress, recognition, and job satisfaction.
3. In terms of the COR theory, do perceptions of recognition and job satisfaction serve as indirect indicators of quality by mediating distress levels?

4.1 Response Rate

The 'Managing Quality in Canadian Hospitals' project surveyed several different nursing units, of these units only six were selected for the present study as they were determined, by the chief research officer, to be similar in patient workloads and acuity. A sample 279 nurses, from the six chosen nursing units, were given the opportunity to complete the nurses' questionnaire. There were 142 nurses' questionnaires (84 RN and 58 LPN) completed, for a 50.9% response rate. Research by Baruch and Holtom (2008) reported that the response rate bench mark for recently published studies was 35-40% and that questionnaire response rates for organizations was approximately 37.2%. Considering these results, the response rate received for this thesis

was typical of those in published research and very good from the organizational standpoint; as such the results should provide more representative information on the nursing population.

4.2 Demographics

According to CIHI (2013), in 2011there were 9, 896 RNs and 2,806 LPNs in Saskatchewan; with a total of 5.2% (n = 659) male and 94.8% (n = 12, 043) female nurses. Further, CIHI (2013) reported that the average age for RNs was 45.0 years and 41.8 years for LPNs. The present study reported a higher percentage of male nurses (n = 12, 8.5%) and that the majority of respondents were 41 years old or greater. Therefore, participants were similar in age to the Saskatchewan average; however, there was a greater number of RNs than LPNs, and the percentage of female nurses well exceeded that of male nurses.

CIHI (2013) reported that the range for years of practice for RNs was: 0 – 10 years = 36.7%, 11 – 20 years = 18.8% and 21+ years = 44.5%; for LPNs: 0 – 10 years = 55.8%, 11 – 20 years = 11.6% and 21+ years = 32.6%. This study reported that the years of practice for nurses was 1 – 10 years = 44.4 %, 11 – 20 years = 14.8 %, 21 – 30 years = 24.6 %, 31 – 40 years = 10.6 % and 41 – 50 years =1.4 %. These results indicated that when compared to the CIHI data, the study participants were newer to the profession than the average for Saskatchewan and that fewer of the study nurses had 21 or greater years of experience.

According to CIHI (2013), LPNs were all considered to have the same education equivalency; but in terms of RN education 47.6% (n = 4715) had diplomas, 49.4% (n = 4890) had baccalaureates, and 2.9% (n = 291) had masters' degrees or higher education. The participants in this study did not have standardized education options to choose from on the nurses' questionnaire; however it was estimated that LPNs had the same educational background and that for RNs there were approximately 51% (n = 43) with a university degree. This estimation for

RNs was slightly higher to the number reported by CIHI, but this may be explained by the fact that there are more new nurses in the study group and baccalaureate entry to practice has been in force in Saskatchewan since 2000, and by the fact that the study group was located in a city with a university nursing program. Overall, due to differences in RN to LPN ratios, sex of the nurses, years of practice, and educational background it cannot be assumed that the sample was representative of all Saskatchewan nurses.

4.3 Scale Outcomes

4.3.1 Quality rating. The mean overall quality rating was reported to be 77.9% (n = 142). The mean quality rating by nursing unit was: Unit 1: 78.2% (n = 30), Unit 2: 81.2% (n = 37), Unit 3: 75.0% (n = 11), Unit 4: 79.1% (n = 22), Unit 5: 75.5% (n = 19), and Unit 6: 74.1% (n = 23). When the data were separated by nursing credentials the mean rating for RNs was 78.8% (n = 84) and the rating ranged from 70-95% while the mean rating for LPNs was 76.6% (n = 58) and ranged from 50-90% (Table 4.2.1). When the data were divided by nursing credentials and nursing unit the data indicated that RNs reported higher quality of care rating than LPNs in all nursing units except Unit 5, but that in this instance the difference was only one percent (Table 4.2.2). Also of note is that two of the nursing units did not have LPN staff, and therefore, no LPN participants.

Table 4.3.1 ***Quality of Care Ratings per Nursing Credentials***

Credential		n	%
Quality Rating per LPNs	50.00	4	6.9
	60.00	2	3.4
	70.00	16	27.6
	80.00	24	41.4
	90.00	12	20.7
	Total	58	100.0
Quality Rating per RNs	70.00	19	22.6
	75.00	17	20.2
	80.00	25	29.8
	85.00	13	15.5
	90.00	9	10.7
	95.00	1	1.2
	Total	84	100.0

Table 4.3.2 ***Quality Reports divided by Nursing Unit and Credentials***

Nursing Unit			Reported Quality
Unit 1	LPN	n 16	
		Mean	77.50
	RN	n 14	
		Mean	78.93
Unit 2	LPN	n 22	
		Mean	80.91
	RN	n 15	
		Mean	81.67
Unit 3	LPN	n 0	
	RN	n 11	
		Mean	75.00
Unit 4	LPN	n 0	
	RN	n 22	
		Mean	79.09
Unit 5	LPN	n 10	
		Mean	76.00
	RN	n 9	
		Mean	75.00
Unit 6	LPN	n 10	
		Mean	66.00
	RN	n 13	
		Mean	80.4

Note. Units 3 and 4 did not have LPN employees.

4.3.2 Distress scale. Cronbach's alpha was used to test the internal consistency of the distress scale items (i.e. how closely related the set of items were as a whole) wherein a high alpha (i.e.

greater than 0.7) was used as evidence that the items reliably measuring the construct. Cronbach's alpha was calculated to be 0.84 for the 16 items and the summative question indicating that all the items were reliably measuring 'distress'. The 16 items of the Distress scale were coded and the modes calculated per item. Results indicated that nurses experience frustration every day although they only express their impatience and anger a few times a year. Participants also reported that their work days were so busy that they are physically exhausted by the end of the day 2-3 times a week and they occasionally end up doing tasks outside their responsibilities. Nurses reported feeling that their work had desensitized their feelings/emotions a few times a year and that they had such demanding workdays that they were emotionally drained by the end of the day 2-3 times a week. Nurses also indicated that only a few times a year they felt they could devote enough time to all of their patients. The nurses felt that they were in control of their daily activities and confident that they were able to do their work at a high standard of care 2-3 times a week (Table 4.3.3). The summative stress rating for all participants had a mean of 3.11 and a mode of 3 indicating that participants felt their stress level was 'moderate'. However 23.2% (n = 33) of participants rated their stress as 'high' and 4.9% (n = 7) of participants rated their stress as 'very high'.

When the summative stress question was divided by nursing credential the mean result for RNs (M = 3.25) and LPNs (M = 2.90) was 'moderate'. The results indicated that overall RNs reported higher stress than LPNs (Table 4.3.4).

Table 4.3.3 ***The 16-items of the Distress Scale: Mean and Mode***

Distress Item **(How frequently do you:)**	*N*	*M*	Mode
* Have workdays when you can devote enough time to all of your patients?	142	5.20	7
Experience frustration dealing with demanding patients?	142	3.75	2
Express impatience when people do not respond to requests as quickly as they should have?	142	5.45	6
Have workdays which are so busy that you are physically exhausted at the end of the day?	142	4.35	6
* Feel that you can concentrate on the tasks that should be done?	142	2.41	2
End up doing tasks which you think are outside of your responsibilities?	142	4.18	4
* Sleep soundly at night without worrying about your job responsibilities?	142	2.85	2
Express anger when people at work make mistakes?	142	3.37	2
Feel frustrated accessing facilities/services for patients?	142	3.07	2
Experience conflict between responsibilities at work and at home?	142	2.13	2
Feel that your work has desensitized your feelings/ emotions?	142	4.50	6
Cancel a personal or social activity in order to meet work commitments?	142	4.24	6
Feel depressed because of the death or serious illness of a patient?	142	2.56	2
Have such a demanding workdays that you are emotionally drained at the end of the day?	142	2.44	1
* Feel confident that you have been able to do your work at a high standard of care?	142	3.19	2
* Feel that you are in control of your day-to-day working activities?	142	3.24	2

*Note: * indicates items that were reverse coded.*

Table 4.3.4 ***Reported Overall Stress per Nursing Credential***

Credential	Reported Stress	n	%
LPN	Very Low	2	3.4
	Low	16	27.6
	Moderate	28	48.3
	High	10	17.2
	Very High	2	3.4
	Total	58	100.0
RN	Low	12	14.3
	Moderate	44	52.4
	High	23	27.4
	Very High	5	6.0
	Total	84	100.0

When the summative distress item data were divided by the 6 nursing units the mode for distress was 3 for all units except one, indicating that the majority of nursing units experience

moderate levels of stress. The nursing unit that differed from the rest was Unit 3 wherein the nurses indicated that they experienced high levels of stress (Table 4.3.5).

Table 4.3.5 ***Reported Stress by Nursing Unit***

Nursing Unit	Stress Level	n	%
Unit 1	Low	9	30.0
	Moderate	15	50.0
	High	4	13.3
	Very High	2	6.7
	Total	30	100.0
Unit 2	Very Low	2	5.4
	Low	11	29.7
	Moderate	14	37.8
	High	10	27.0
	Total	37	100.0
Unit 3	Moderate	4	36.4
	High	6	54.5
	Very High	1	9.1
	Total	11	100.0
Unit 4	Low	3	13.6
	Moderate	13	59.1
	High	5	22.7
	Very High	1	4.5
	Total	22	100.0
Unit 5	Low	4	21.1
	Moderate	8	42.1
	High	6	31.6
	Very High	1	5.3
	Total	19	100.0
Unit 6	Low	1	4.3
	Moderate	18	78.3
	High	2	8.7
	Very High	2	8.7
	Total	23	100.0

4.3.3 Recognition Scale. Cronbach's alpha was used to test internal consistency of the seven recognition items and indicated reliability at 0.75. The six items of the recognition scale were coded and the means and modes for all the items were calculated (Table 4.3.6). Results indicated that nurses 'agree' that patients often express appreciation for the clinical care that they provide, that they feel that they receive recognition from their peers, and that the physicians that they work with show respect for them as a nurse. The results also indicated that nurses 'agree slightly'

that their contributions to the greater well-being of their community are recognized and that their efforts have led to advances in their nursing careers. Finally the results showed that nurses 'disagree slightly' that the administrators they work with understand the stresses they experience.

Table 4.3.6 ***Means and Modes for the Recognition Scale Items***

Recognition scale item	*N*	*M*	Mode
Your patients express appreciation for the clinical care that you provide them.	142	4.61	5
Your contributions to the general well-being of your community are recognized.	142	4.29	5
When you make an extra effort you receive recognition from your peers.	142	3.51	4
Physicians you work with show respect for you as a nurse.	142	4.11	5
Administrators you work with understand the stresses you experience as a nurse.	142	3.24	3
Your efforts as a nurse have led to advances in your nursing careers.	142	3.38	4

The mode and a frequencies table were calculated for the summative recognition item. The mode (4) and the mean (M = 4.46) indicated that the nurses believed that the full range of rewards they received for all the contributions they made were 'fair' and nearing 'somewhat favorable'. The frequency table indicated that the majority of nurses felt their rewards were fair or better (Table 4.3.7). The mode when comparing the summative item by nursing credentials indicated that both groups thought the rewards for contributions were 'fair'. The frequency table indicated that the percentage of LPNs (27.6%) reporting less than 'fair' rewards was greater than that of RNs (20.3%) and that the percentage of LPNs (48.2%) reporting the rewards greater than 'fair' was lower than RNs (50%) (Table 4.3.8). The summative recognition item data were then divided by nursing unit, the mode results indicated that four of the units believed the rewards

were ‘fair’ and that two units (units 4 and 6) believed the rewards were better or ‘somewhat favourable’.

Table 4.3.7 ***Summative Recognition Item Frequencies***

	n	%
Unfavourable	9	6.3
Somewhat Unfavourable	24	16.9
Fair	39	27.5
Somewhat Favourable	35	24.6
Favourable	32	22.5
Very Favourable	3	2.1
Total	142	100.0

Table 4.3.8 ***Reported Recognition per Nursing Credential***

Nursing Credential	Reported Recognition	n	%
LPN	Unfavourable	4	6.9
	Somewhat Unfavourable	12	20.7
	Fair	14	24.1
	Somewhat Favourable	12	20.7
	Favourable	14	24.1
	Very Favourable	2	3.4
	Total	58	100.0
RN	Unfavourable	5	6.0
	Somewhat Unfavourable	12	14.3
	Fair	25	29.8
	Somewhat Favourable	23	27.4
	Favourable	18	21.4
	Very Favourable	1	1.2
	Total	84	100.0

4.3.4 Satisfaction Scale. Cronbach’s alpha was used to check the internal consistency of the eight items and the summative item in the satisfaction scale indicating reliability at 0.87. The mode for each of the eight satisfaction items was calculated and indicated that participants were most often ‘satisfied’ with their career advancement in nursing. However the data indicated that

the nurses were only ‘somewhat satisfied’ with their success in meeting the needs of their patients, their ability to access resources to treat their patients, their capacity to keep up with advances in their clinical specialty, their role in organizing treatment programs for patients in their community, their authority to get clinical decisions carried out, their ability to keep responsibilities at work from intruding on their personal lives, and their ability to provide high quality care to their patients (Table 4.3.9).

Table 4.3.9 ***Satisfaction Item Means and Modes***

Satisfaction Items (How satisfied are you with:)	*N*	*M*	Mode
Your career advancement?	142	4.18	5
Your success in meeting the needs of your patients?	142	4.07	4
Your ability to access resources needed to treat your patients?	142	3.89	4
Your capacity to keep up with advances in your clinical specialty?	142	4.09	4
Your role in organizing treatment programs for patients in your community?	142	3.56	4
Your authority to get clinical decisions carried out?	142	3.75	4
Your ability to keep responsibilities at work from intruding on your personal life?	142	4.20	4
Your ability to provide high quality care to your patients?	142	3.94	4

The mode and a frequency table were then calculated for the summative satisfaction item. The mode indicated that considering their various roles and responsibilities, nurses were ‘satisfied’ with their nursing careers. The frequency table indicated that 3.5% (n = 5) of nurses were ‘very dissatisfied’, 3.5% (n = 5) were ‘dissatisfied’, 10.6% (n = 15) were ‘somewhat dissatisfied’, that 38.0% (n = 54) were ‘somewhat satisfied, 41.5% (n = 59) were ‘satisfied’ and that 2.8% (n = 4) were ‘very satisfied’ with their careers. The summative item data were then divided by nursing credentials (i.e. RN and LPN), the mode (5) and mean (*M* = 4.19) indicated that both RNs and LPNs reported that they were ‘satisfied’ with their nursing careers. In terms of their careers, the frequency table indicated that 55.1 % of LPNs were less than ‘satisfied’ compared to 56% of RNs; that 41.4% of LPN were ‘satisfied’ compared to 41.7% of RNs; and that 3.4% of LPNs were ‘very satisfied’ compared to 2.4% of RNs (Table 4.3.10 and Table 4.3.11). The summative

item data were separated by nursing unit and the modes and a frequency table were calculated. The modes indicated that four of the nursing units were 'somewhat satisfied' and that the other two units were 'satisfied' with their nursing careers. Overall the frequency table indicated that very few nurses from any nursing unit were less than 'somewhat satisfied' or more than 'satisfied' (Table 4.3.12, Table 4.3.13).

Table 4.3.10 ***Overall Satisfaction per Nursing Credential (LPN)***

Credential	Reported Satisfaction	*n*	%
LPN	Very Dissatisfied	2	3.4
	Dissatisfied	2	3.4
	Somewhat Dissatisfied	8	13.8
	Somewhat Satisfied	20	34.5
	Satisfied	24	41.4
	Very Satisfied	2	3.4
	Total	58	100.0

Table 4.3.11 ***Overall Satisfaction per Nursing Credential (RN)***

Credential	Reported Satisfaction	n	%
RN	Very Dissatisfied	3	3.6
	Dissatisfied	3	3.6
	Somewhat Dissatisfied	7	8.3
	Somewhat Satisfied	34	40.5
	Satisfied	35	41.7
	Very Satisfied	2	2.4
	Total	84	100.0

Table 4.3.12 ***Overall Satisfaction per Nursing Unit***

Unit 1	*n*	30
	M	4.10
	Mode	5
Unit 2	*n*	37
	M	4.41
	Mode	5
Unit 3	*n*	11
	M	4.18
	Mode	4
Unit 4	*n*	22
	M	4.23
	Mode	4
Unit 5	*n*	19
	M	4.16
	Mode	4
Unit 6	*n*	23
	M	3.96
	Mode	4

Note. The Satisfaction scale was measured on a six point Likert scale; 1= 'very dissatisfied' and 6= 'very satisfied'.

Table 4.3.13a ***Frequency Table for Reports of Satisfaction per Nursing Unit***

Nursing Unit	**Reported Satisfaction**	*n*	%
Unit 1	Very Dissatisfied	2	6.7
	Somewhat Dissatisfied	4	13.3
	Somewhat Satisfied	11	36.7
	Satisfied	13	43.3
	Total	30	100.0
Unit 2	Very Dissatisfied	1	2.7
	Somewhat Dissatisfied	5	13.5
	Somewhat Satisfied	9	24.3
	Satisfied	21	56.8
	Very Satisfied	1	2.7
	Total	37	100.0
Unit 3	Somewhat Dissatisfied	1	9.1
	Somewhat Satisfied	7	63.6
	Satisfied	3	27.3
	Total	11	100.0

Table 4.3.13b ***Frequency Table for Reports of Satisfaction per Nursing Unit***

Nursing Unit	Reported Satisfaction	*n*	%
Unit 4	Dissatisfied	1	4.5
	Somewhat Dissatisfied	2	9.1
	Somewhat Satisfied	10	45.5
	Satisfied	9	40.9
	Total	22	100.0
Unit 5	Dissatisfied	1	5.3
	Somewhat Dissatisfied	3	15.8
	Somewhat Satisfied	8	42.1
	Satisfied	6	31.6
	Very Satisfied	1	5.3
	Total	19	100.0
Unit 6	Very Dissatisfied	2	8.7
	Dissatisfied	3	13.0
	Somewhat Satisfied	9	39.1
	Satisfied	7	30.4
	Very Satisfied	2	8.7
	Total	23	100.0

4.4 Relationships between Variables

4.4.1 Spearman rank correlations. Spearman's rank correlation was used to describe the relationship between the quality variable and the distress, recognition, and satisfaction variables to test the null hypothesis that there is no relationship between the variables. To do this the overall quality rating item and the summative items were used.

Spearman's correlation (r_s) was done with the summative distress variable and the quality of care variable. Spearman's rho indicated no relationship between quality and distress (r_s [142] = -0.09 , p = 0.31). The null hypothesis that there is no relationship between ratings of quality care and reports of stress could not be rejected.

Spearman's correlation was done with the summative recognition variable and the quality of care variable. Spearman's rho indicated that there was a fair, positive relationship between the

variable that was significant (r_s [142] = 0.30 , $p < 0.001$). The null hypothesis was rejected because quality increased as recognition increased.

Spearman's correlation was done with the summative satisfaction variable and the quality of care variable. Spearman's rho indicated that there was a small, positive relationship between the variable that was significant (r_s [142] = 0.20 , $p = 0.02$). The null hypothesis that there is no relationship between the variable could be rejected because quality rating increased as satisfaction rating increased.

Spearman's correlation was done with the summative distress variable and the summative recognition variable. Spearman's rho indicated that there was a significant negative relationship between the two variables (r_s [142] = -0.21, $p < 0.014$). This statistic indicated that as distress levels increased the recognition levels decreased.

Spearman's correlation was done with the summative distress variable and with the summative satisfaction variable. Spearman's rho indicated that there was a significant negative relationship between the two variables (r_s [142] = -0.26, $p = 0.002$). This statistic indicated that as distress levels increased the satisfaction levels decreased.

Spearman's correlation was done with the summative recognition variable and the summative satisfaction variable. Spearman's rho indicated that there was a moderate positive and significant relationship between the two variables (r_s [142] = 0.61, $p < 0.01$). This statistic indicated that satisfaction increased with increased recognition levels.

4.4.2 Kruskal-Wallis H-test. The Kruskal-Wallis H-test was used to compare the medians of the six nursing units that completed nurses' questionnaires to see if there was a difference among the type of nursing unit and their perceptions of quality, distress, recognition, and satisfaction. The null hypothesis tested was that there is no difference in the medians of the nursing units and

the alternative hypothesis was that not all nursing unit medians are equal. The significance level for this test was set to $\alpha = 0.05$. The results for quality [H (5) = 13.49, $p = 0.019$] and distress [H (5) = 11.27, $p = 0.046$] suggested that there was a significant difference in how the nursing units rated quality and distress. The results for recognition [H (5) = 4.77, $p = 0.445$] and satisfaction [H (5) = 3.23, $p = 0.664$] indicated that there was not a significant difference in how the nursing units rated their recognition and satisfaction (Table 4.4.1 and Table 4.4.2).

Table 4.4.1 ***Kruskal-Wallis H-test: Mean Ranks for Quality, Distress, Recognition and Satisfaction per Nursing Unit***

	Nursing Unit	n	Mean Rank
Overall Quality	Unit1	30	71.73
	Unit 2	37	88.24
	Unit 3	11	51.91
	Unit 4	22	75.05
	Unit 5	19	54.89
	Unit 6	23	63.96
	Total	142	
Overall Distress	Unit 1	30	63.33
	Unit 2	37	62.31
	Unit 3	11	101.73
	Unit 4	22	74.91
	Unit 5	19	76.37
	Unit 6	23	75.20
	Total	142	
Overall Recognition	Unit 1	30	69.70
	Unit 2	37	82.97
	Unit 3	11	68.68
	Unit 4	22	70.43
	Unit 5	19	66.29
	Unit 6	23	62.07
	Total	142	
Overall Satisfaction	Unit 1	30	69.08
	Unit 2	37	80.95
	Unit 3	11	64.77
	Unit 4	22	70.45
	Unit 5	19	67.18
	Unit 6	23	67.24
	Total	142	

Table 4.4.2 ***Kruskal-Wallis H-Test Statistic***

	Overall Quality	Overall Distress	Overall Recognition	Overall Satisfaction
Chi-Square (H-statistic)	13.49	11.27	4.77	3.23
Df	5	5	5	5
Asymp. Sig.	**.019**	**.046**	.445	.664

4.4.3 Mann-Whitney U-test. A Mann-Whitney U test was used to compare two groups (i.e. RN and LPN) by sum mean ranks to see if they differ on some level. The Mann-Whitney tests looked at the quality, distress, recognition (equity), and satisfaction medians separately for both the RNs and LPNs. The null hypothesis for each test was $\mu_{RN} = \mu_{LPN}$ and the alternative hypothesis was $\mu_{RN} \neq \mu_{LPN}$. The results of the test comparing quality of care on units indicated that RNs (n = 84) had an average rank of 73.62 while LPNs (n =58) had an average rank of 68.43. From the data it was concluded that there was not a significant difference between the RN group and the LPN group in how they perceived quality [U = 2258, Z = -0.76, p = 0.45]. The results of the test comparing stress indicated that RNs (n = 84) had an average rank of 78.05 while LPNs (n = 58) had an average rank of 62.02. From the data it was concluded that the RN's mean distress was significantly greater than the mean stress of LPNs [U = 1886, Z = -2.48, p = 0.01]. The results of the test comparing recognition indicated that RNs (n = 84) had an average rank of 71.93 and that LPNs (n =58) had an average rank of 70.88. From the data it was concluded that there was not a significant difference in the means of the RNs and the LPNs [U = 2400, Z = -0.15, p = 0.88]. The results of the test comparing satisfaction indicated that RNs (n = 84) had an average rank of 71.90 while LPNs (n = 58) had an average rank of 70.91. From the

data it was concluded that there was not a significant difference in the means of the RNs and LPNs [U = 2402, Z = -0.15 , p = 0.88].

A Mann-Whitney U-test was then performed to compare the two nursing credentials, but split them by the four nursing units (Table 4.4.3 to Table 4.4.8 for ranks and Table 4.4.9 for U-test). The results indicated that there was no significant difference in how the RNs and LPNs on nursing units 1, 2 and 5 perceived quality, distress, recognition or job satisfaction. The results of the U-test comparing the RNs and LPN on nursing unit 6 for quality indicated that there was a significant difference in how the RNs (n = 84, mean rank = 14.97) and LPNs (n = 58, mean rank = 8.20) perceived quality [U = 27, Z = - 2.51, p = 0.01], but no difference in distress, recognition or job satisfaction.

Table 4.4.3 ***Mann-Whitney U-test for Quality, Distress, Recognition and Satisfaction per Nursing Credential for Nursing Ranks for Unit 1***

What nursing unit do you belong to?		Nursing Credential	*n*	Mean Rank
Unit 1	Quality	LPN	16	15.06
		RN	14	16.00
		Total	30	
	Distress	LPN	16	15.25
		RN	14	15.79
		Total	30	
	Recognition	LPN	16	13.75
		RN	14	17.50
		Total	30	
	Job Satisfaction	LPN	16	14.25
		RN	14	16.93
		Total	30	

Table 4.4.4 ***Mann-Whitney U-test for Quality, Distress, Recognition and Satisfaction per Nursing Credential for Nursing Ranks for Unit 2***

What nursing unit do you belong to?		Nursing Credential	*n*	Mean Rank
Unit 2	Quality	LPN	22	18.27
		RN	15	20.07
		Total	37	
	Distress	LPN	22	17.50
		RN	15	21.20
		Total	37	
	Recognition	LPN	22	20.27
		RN	15	17.13
		Total	37	
	Job Satisfaction	LPN	22	17.91
		RN	15	20.60
		Total	37	

Table 4.4.5 ***Mann-Whitney U-test for Quality, Distress, Recognition and Satisfaction per Nursing Credential for Nursing Ranks for Unit 3***

What nursing unit do you belong to?		Nursing Credential	*n*	Mean Rank
Unit 3	Quality	LPN	0	.00
		RN	11	6.00
		Total	11	
	Distress	LPN	0	.00
		RN	11	6.00
		Total	11	
	Recognition	LPN	0	.00
		RN	11	6.00
		Total	11	
	Job Satisfaction	LPN	0	.00
		RN	11	6.00
		Total	11	

Table 4.4.6 ***Mann-Whitney U-test for Quality, Distress, Recognition and Satisfaction per Nursing Credential for Nursing Ranks for Unit 4***

What nursing unit do you belong to?		Nursing Credential	*n*	Mean Rank
Unit 4	Quality	LPN	0	.00
		RN	22	11.50
		Total	22	
	Distress	LPN	0	.00
		RN	22	11.50
		Total	22	
	Recognition	LPN	0	.00
		RN	22	11.50
		Total	22	
	Job Satisfaction	LPN	0	.00
		RN	22	11.50
		Total	22	

Table 4.4.7 ***Mann-Whitney U-test for Quality, Distress, Recognition and Satisfaction per Nursing Credential for Nursing Ranks for Unit 5***

What nursing unit do you belong to?		Nursing Credential	*n*	Mean Rank
Unit 5	Quality	LPN	10	9.70
		RN	9	10.33
		Total	19	
	Distress	LPN	10	8.70
		RN	9	11.44
		Total	19	
	Recognition	LPN	10	10.00
		RN	9	10.00
		Total	19	
	Job satisfaction	LPN	10	10.20
		RN	9	9.78
		Total	19	

Table 4.4.8 ***Mann-Whitney U-test for Quality, Distress, Recognition and Satisfaction per Nursing Credential for Nursing Ranks for Unit 6***

What nursing unit do you belong to?		Nursing Credential	*n*	Mean Rank
Unit 6	Quality	LPN	10	8.20
		RN	13	14.92
		Total	23	
	Distress	LPN	10	10.50
		RN	13	13.15
		Total	23	
	Recognition	LPN	10	10.90
		RN	13	12.85
		Total	23	
	Job Satisfaction	LPN	10	12.90
		RN	13	11.31
		Total	23	

Table 4.4.9 ***Mann-Whitney U-Test Statistic***

What nursing unit do you belong to?		Quality	Distress	Recognition	Job Satisfaction
Unit 1	Mann-Whitney U	105.00	108.00	84.00	92.00
	Wilcoxon W	241.00	244.00	220.00	228.00
	Z	-.30	-.18	-1.20	-.89
	Asymp. Sig. (2-tailed)	.76	.86	.23	.37
Unit 2	Mann-Whitney U	149.00	132.00	137.00	141.00
	Wilcoxon W	402.00	385.00	257.00	394.00
	Z	-.53	-1.08	-.90	-.83
	Asymp. Sig. (2-tailed)	.59	.28	.37	.41
Unit 5	Mann-Whitney U	42.00	32.00	45.00	43.00
	Wilcoxon W	97.00	87.00	90.00	88.00
	Z	-.26	-1.13	.00	-.17
	Asymp. Sig. (2-tailed)	.79	.26	1.00	.86
Unit 6	Mann-Whitney U	27.00	50.00	54.00	56.00
	Wilcoxon W	82.00	105.00	109.00	147.00
	Z	-2.51	-1.29	-.70	-.59
	Asymp. Sig. (2-tailed)	.01	.20	.49	.56

Note: *Units 3 and 4 did not have LPNs.*

4.5 Summary

A descriptive correlational study was done to examine the relationships between perceptions of quality, distress, recognition and satisfaction in the nurses' work place. Demographic data and scale reliabilities were discussed prior to statistical analyses. Overall Spearman's correlation

results indicated that there were significant positive relationships between recognition-quality, satisfaction-quality and recognition-satisfaction; while there were significant negative relationships between distress-recognition and distress-satisfaction. The Kruskal-Wallis H-test results indicated that there was a significant difference in how the six nursing units perceived quality and distress, but no significant difference in perceptions of recognition or satisfaction. The Mann-Whitney U-test results indicated that there was a significant difference in how RNs and LPNs on nursing unit 6 perceived quality.

Chapter 5 Discussion

The purpose of the present study was to address how nurses' perceptions of distress, job satisfaction and work place recognition influenced their assessment of quality care in Canadian, and more specifically Saskatoon, hospitals. This research project utilized Hobfoll's Conservation of Resources (COR) theory as a theoretical framework to better understand nurses' perceptions and to focus on occupational distress, recognition, and job satisfaction as a potential means of regarding environmental effects on quality of care.

5.1 Scale Outcomes

5.1.1 Quality. The nurses' quality perceptions were a moderately high value and they ranged between 74.1% - 81.2% across the six nursing units. However when the quality scale was divided by nursing credentials, it was noted that on average RNs (n = 84, 78.8%) rated quality of care higher than LPNs (n = 58, 76.6%) and that there was a smaller range of responses (RN 70 - 95%, LPNs 50 - 90%). These numbers suggested that the quality on nursing units was perceived relatively high across both nursing credentials in all nursing units. The range of quality perceptions may have been related to the nurses' work environments in terms of perceived ability to attain the resources needed to complete nursing tasks. Research by Ridley, Wilson, Harwood and Laschinger (2009) studied Canadian nephrology nurses and how their work environments contributed to nurses' job satisfaction, health outcomes and perceptions of quality of patient care. Their research indicated that approximately 86.7% of the nurses studied (RNs only) reported patient care to be good or excellent while 13.3% reported that the patient care was fair or poor. These results are similar to those of the present study in that overall registered nurses reported good to excellent quality of care, however their overall quality ratings were slightly higher than those the present study which may have been related to the study's participant mix.

Ridley, Wilson, Harwood and Laschinger (2009) also explored whether non-regulated workers were being employed on the nursing units and if so how the nurses perceived those workers had affected patient care quality. The results indicated that 62.4% of the nurses stated that the question was not applicable as there were no non-regulated employees on their units. However, 20% of the nurses who worked on the units where non-regulated employees were employed stated that the care had remained the same, 1.6% said that it had improved and 16% felt that the care had deteriorated. These results indicated that non-regulated workers may be perceived by RNs as a factor for the decreased quality of care delivered; possibly because RNs were short in number and were being asked to perform other duties that the non-regulated staff could not. Also the non-regulated staff may have not been given the same education on care provision and as such were not being held to the same standards of care delivery as the RNs, or because there was a gap in the continuity of the nursing care provided because the RN was busy elsewhere. The delegation that RNs utilize to achieve their care goals may have been the factor that differentiated the quality ratings between the two nursing credentials in this study. This may explain why the LPNs in the present study reported a larger range of quality, in that they were expected to perform nursing care (i.e. personal care, dressing changes, patient and family teaching) in order to enable the RNs to deliver care elsewhere (i.e. administrative work, reviewing blood work, discussions with physicians and other healthcare professionals) and that the LPNs may not have felt they had as much control over their work activities and as a result may not have received the 'whole picture' of patient care.

5.1.2 Distress. McVicar (2003) reported that the nursing work environment had six main sources of stress that could benefit or become maladaptive for the nurse: work load, leadership/management issues, professional conflict, emotional demands of caring, shift work,

and lack of reward. With so many foci of stress, it was not surprising that the research showed that the summative stress rating for all participants indicated a 'moderate' stress level, and that 23.2% of participants rated their stress as 'high' while 4.9% of participants rated their stress as 'very high'. Further, RNs were shown on average to report higher levels of distress than their LPN counterparts. The difference in perception of distress may have been from differences in role expectations on the unit. For example, RNs often have certifications to perform specialized nursing tasks that the LPNs would not, ending in the RN having more responsibility for the overall care delivery of the patient load. The administrative duties that many RNs experience on top of their patient load (i.e. teaching roles, charge nurse roles, paper work, and providing emergency care in crises situations) may have also increased stress perceptions in the RN participants.

The majority of nursing units reported experiencing moderate levels of stress. The nursing unit that differed from the rest was Unit 3 wherein the nurses indicated that they experienced high levels of stress. This may be explained in that this particular unit did not have any LPNs to either assist with the workload/stressors, the RNs on that unit may have been understaffed, or the patient acuity level may have been higher than that of the other nursing units.

The present research indicated that nurses experienced frustration every day and they occasionally ended up doing tasks outside their responsibilities. This may be because nurses provide the bulk of interaction with patients and are required to interact with other inter-professional team members and / or families to access, deliver, advocate, teach and organize tests/procedures/services for patients. Nurses are also available to the patient throughout the hospital stay and may be required to perform housekeeping duties to maintain a clean and safe work environment or food preparation tasks for the patient as part of a holistic approach to

patient needs. These tasks are not necessarily easy and they take valuable time to complete in lieu of doing expected clinical procedures or paper work. These tasks may contribute to the frustration experienced by nurses. Research by Lavoie-Tremblay, Trepanier, Fernet and Bonneville-Roussy (2013) stated that matching the type of resource (i.e. physical, cognitive, or emotional) to the type of demand experienced would be the most effective way to protect against strain in nurses. For example, providing a nurse with lift equipment when patients are heavy to move would alleviate physical stress. Considering this, it would make sense that the extra tasks that the nurses feel compelled to perform in order to provide holistic care may not be a recognized resource drain for nurses and as such there may not have an available matching resource from which the nurses could buffer the frustration/strain.

Most full time nurses work eight to twelve hour shifts, these nurses would be at work for three to five days a week, which was important as the nurses in this study reported that they had such demanding workdays that they were emotionally drained by the end of the day 2-3 times a week. The data also suggested that the nurses' work days were so busy that they were physically exhausted by the end of the day 2 - 3 times a week. This may have been because of the multifaceted role nurses play. For example, nurses are 'hands on' when assisting a patient with daily activities such as mobilization or washing; it is an emotional profession in that nurses must navigate social systems in relation to patients, family, and peers with empathy and compassion; and the nursing profession is academic or administrative in that the nurses must utilize best practices in their daily endeavors and that they must also be familiar with the health regions' required paper work and standards in order to achieve their care goals.

The data also indicated that nurses reported that their work had desensitized their feelings/emotions a few times a year, that they felt that they were in control of their daily

activities and confident that they were able to do their work at a high standard of care only 2 - 3 times a week, and that only a few times a year they felt they could devote enough time to all of their patients. This information may not seem to be overly important, however this desensitization and feeling of decreased ability to perform ideally may be a precursor to a phenomena called 'burnout' wherein an individual reports emotional exhaustion, depersonalization, and reduced personal accomplishment (Brenninkmeijer, & VanYperen, 2003). These symptoms have the potential to change patient care delivery and affect nurse, patient and organizational outcomes. Further, research (Jones, Wells, Gao, Cassidy and Davie, 2013) has shown that control over work is an important aspect of stress and job satisfaction; and that when comparing medical and allied health professionals to nursing it was found that nurses reported feeling lower levels of control over their daily activities. Their research also indicated that individuals who perceived high levels of control over their work experienced job satisfaction even when work demands increased. Nurses are often required to perform tasks ordered by other professionals and organize their care delivery around other professionals to achieve the desired patient goals, which inevitably ends in the nurses having to perform tasks on others' schedules, often interrupting the nurses' planned activities. In terms of the distress results reported in this thesis, it makes sense that the nurses would feel that they were rarely in control of their own activities and reported a moderate to high level of distress.

5.1.3 Recognition. Overall, nurses (both RN and LPN) reported that the rewards they received for the contributions they made were fair. However, the percentage of LPNs who reported the rewards were less than fair was greater than that of RNs. This may have been related to the increasing skill base that many LPNs are recommended to have (i.e. giving medications, starting IVs and working with PICC lines) that are coming to mirror the RN skill base. However,

the most recent literature available from the workers' union associated with LPNs indicates that the new skill sets are not standardized across all LPNs, thus LPNs may not be getting the recognition from other staff members for their abilities, and their wages have not changed to reflect their new responsibilities (CUPE, 2008).

The results of the recognition scale indicated that nurses 'agree' that patients often expressed appreciation for the clinical care that they provided, that they felt that they received recognition from their peers, that the physicians that they worked with showed respect for them as a nurse. The results also indicated that nurses 'agree slightly' that their contributions to the greater well-being of their community were recognized and that their efforts had led to advances in their nursing careers. Finally the results showed that nurses 'disagree slightly' that the administrators they work with understand the stresses they experience. This information indicated that overall nurses felt that they were recognized for their skills and education. However, the results suggest that there is a communication break between nurses and nursing administration in terms of what nurses do during their shifts and how that affects their stress levels.

Research by Jones, Wells, Gao, Cassidy and Davie (2013) indicated that managerial support was related to more control, less strain, increased reward, and greater work satisfaction. Similarly, Buffington, Zwink, Fink, DeVine and Sanders (2012) studied factors affecting the retention of RNs; their research supported the findings of the present study in that the RNs they studied reported feeling respected by their coworkers and that their talents were appreciated. However, the nurses also reported feeling that there was a lack of support, appreciation/acknowledgement by their nurse managers and listed this as a reason for leaving their employment. The nurses in the study reported a need for improved manager support, respectability, relationships, improved shared leadership and listening to ideas/concerns. This

research made sense in terms of the present research's findings, in that improved relationships with managers would lead to better communication and could be seen as a resource to help buffer work related stressors.

5.1.4 Satisfaction. The present research indicated that overall nurses were 'satisfied' with their career advancement in nursing. However, the data indicated that the nurses on average were only 'somewhat satisfied' with their success in meeting the needs of their patients, their ability to access resources to treat their patients, their capacity to keep up with advances in their clinical specialty, their role in organizing treatment programs for patients in their community, their authority to get clinical decisions carried out, their ability to keep responsibilities at work from intruding on their personal lives, and their ability to provide high quality care to their patients. This lower satisfaction in their abilities to perform patient care may have been related to the necessity of rationing or omitting of nursing care in order to carry out the necessary nursing tasks with limited time and resources (Schubert, Glass, Clarke, Aiken, Schaffert-Witvliet, Sloane, and De Gest, 2008). As such a nurse would have prioritized nursing assessments and interventions and may not have been able to accomplish all the nursing tasks that could impact patient and organizational outcomes (i.e. skin care and mobilization of patients).

5.2 Relationships between Variables

5.2.1 Relationships between concepts. Spearman rank correlation was used to describe the relationships between the variables (quality, distress, recognition and job satisfaction) in this thesis. The null hypothesis was that there would be no relationship between the variables, and the alternative hypothesis was that there would be a relationship between the variables.

5.2.1.1 Distress and quality. Spearman's rho indicated no statistically significant relationship between distress and quality; this result may have been a result of resources in the nurses' work environment that buffered the possible effect of distress on quality of care perceptions.

5.2.1.2 Recognition, satisfaction and quality. Spearman's rho indicated a significant positive relationship between recognition and quality and a significant positive relationship between satisfaction and quality. These results make sense as recognition and satisfaction levels suggest that they are indicators of nurses' perceptions of quality care delivery in that recognition is a resource (i.e. a source of support) and satisfaction indicates the level to which a nurse is happy with their ability to deliver care.

5.2.1.3 Recognition, satisfaction and distress. Spearman's rho also indicated that there was a significant negative relationship between distress levels and recognition levels, a significant negative relationship between distress and satisfaction, and a positive significant relationship between satisfaction and recognition. Similarly, research by Jones, Wells, Gao, Cassidy and Davie (2013) studied work stress and well-being in an oncology setting using multidisciplinary healthcare professionals as the participants. Overall, their research found that increasing work demands (stressors) were related to low levels of perceived control and decreased satisfaction; but that individuals with high levels of perceived control over their work were protected even when the demands on them increased, and that perceptions of high reward at work was also protective of satisfaction, but to a lesser extent when levels of effort were high.

In terms of the first research question: *'What relationship(s) might exist between perceptions of the Quality of care provided and stress, recognition, and job satisfaction experienced at work?'* ; the research indicated that perceptions of quality decreased as distress levels increased; that quality perceptions increased with increased perceptions of recognition and job satisfaction.

5.2.2 Nursing unit comparisons. The Kruskal-Wallis H-test was used to compare the medians of the six nursing units that completed nurses' questionnaires to see if there was a difference among the type of nursing unit and their perceptions of quality, distress, recognition, and satisfaction. The results for quality and distress suggested that there was a significant difference in how the nursing units rated quality and distress. This may have had something to do with differing nursing specialties, care expectations, administrative involvement in care delivery, or potentially different patient acuities on the nursing units. The results for recognition and satisfaction indicated that there was not a significant difference in how the nursing units rated their recognition and satisfaction. Overall, the results indicated that there exists differences in the work environment of the nurses, and suggests that distress may be an indicator of quality even between nursing units.

5.2.3 Nursing qualification comparisons. Because there were significant differences in the H-test for Quality and Distress, the Mann-Whitney U-test was used to compare the two nursing groups (i.e. RN and LPN) by their sum mean ranks. Of note, nursing units three and four could not undergo analysis as they had no LPN participants. The U-test indicated that there were no significant differences in how LPNs and RNs rated quality, recognition or job satisfaction. However, the U-test indicated that there was a significant difference in how RNs and LPNs rated distress.

The U-test comparing the two nursing credentials within their own nursing units was done to determine if the difference noted in the H-tests regarding distress originated from a particular unit. The results indicated that there was no significant difference in how the RNs and LPNs on units 1, 2, and 5 perceived quality, distress, recognition or job satisfaction. However, the results indicated that the RNs and the LPNs on nursing unit 6 reported a significant difference in

perceptions of quality, but no difference in distress, recognition, and job satisfaction. These results indicated that the RNs perceived quality to be significantly higher than the LPNs on that nursing unit. This may have been due to the expectations for care that each of the nursing credentials would be required to provide and may also have been related to the degree to which the nurses felt they provided the care that was expected of them. For example, the RNs on the unit may have played a more administrative role and the LPNs may have provided more personal care to the patients; as such the RNs may have felt that their work could be completed to a high level through delegation, but the LPNs may have felt that they had a heavier work load and were not able to provide the care that they would wish for the patients due to time constraints and staff to patient ratios.

In terms of the second research question: '*Is there was a difference between registered nurses (RN) and licensed practical nurses (LPN) in terms of how they perceived quality care, stress, recognition, and job satisfaction?'*; the research results indicated that overall there was no significant difference in how RNs and LPNs perceived quality, recognition or job satisfaction. However, there was a significant difference in how the nursing credentials perceived distress levels. Further, when the data were split by nursing unit; there was a significant difference on nursing unit 6: the RNs perceived higher quality than the LPNs. These results suggest that work environment may have played a role in quality perceptions on this nursing unit.

5.3 Hobfoll's Conservation of Resources Theory

Hobfoll's Conservation of Resources (COR) theory was used to view the nursing work environment because it emphasized culturally derived contexts of the work environment in explaining the stress process. This theory revolves around the idea that stress occurs when an individual perceives a threat to what they valued (i.e. resources), and that individuals have a

limited amount of available resources to use to adapt to (i.e. be resilient) stressors in their work environment. In terms of this research, the individuals were staff nurses experiencing daily work related demands and using resources to adapt to the stresses experienced. It was an assumption of this study that nurses able to adapt to their environments would be able to perceive higher quality of care on their nursing units. It was also assumed that recognition and satisfaction would be resources that the nurses utilized to buffer work stressors.

The results of this research indicated that on average nursing units caused nurses a 'moderate' amount of stress; although there were reports from approximately a quarter of the nurses indicating that they perceived higher amounts of stress. Nurses frequently (2-3 times a week) expressed feelings of physical exhaustion, desensitization to feelings/emotions, and confidence that they were able to work at a high standard of care; the first two expressions lean toward Maslach et al.'s (2001) conceptualization of burnout, however the confidence that they are working at a high standard of care indicated that there may be a stress 'buffer' for these nurses. This also made sense when considering that there was an insignificant negative relationship between distress and quality perceptions.

The recognition results indicated that the majority of nurses believed that the rewards they received for their contributions were fair or better than fair, suggesting that the majority of the nurses felt they were receiving enough resources from work to adapt to the stressors experienced while working. The positive perception of recognition from co-workers and patients might have fostered positive emotional and functional outcomes in terms of the nurses reinvesting in their work place, making it possible for nurses to support others to gain resources (i.e. the nurse may be more perceptive to a patient's well-being or the nurse may feel that assisting a peer would be possible and through this provide emotional or even physical support). This thought is supported

by LeBlanc et al.'s (2010) research regarding nurses' feelings of efficacy and how increasing feelings of efficacy may have led to a positive resource spiral that improved nurses' team commitment and view of collaborative practice in their nursing unit, which then had a reciprocated effect on increasing efficacy.

The Satisfaction results indicated that overall nurses were satisfied with their nursing careers when considering all their roles and responsibilities. In terms of COR theory, these results suggested that within their social context, the majority of nurses were able to maintain a resource equilibrium, which allowed them to perform their duties at an acceptable level and maintain an acceptable quality of patient care, without feeling that they were losing resources to the point that they could not invest in their work environment. However, these results also suggested that there was room for improvement, in that if it were possible for nurses to report perceptions of more than 'satisfied', their distress levels might be decreased and their perceptions of quality of care could also increase.

Research question number three: 'In terms of the COR theory, do perceptions of recognition and job satisfaction serve as indirect indicators of Quality by mediating distress levels?'; the research results suggest that recognition and job satisfaction can be viewed as indirect indicators of quality perception by possibly mediating distress levels. Spearman's rank correlations indicated that there were significant positive relationships between recognition and quality/job satisfaction and quality; and that there was an insignificant relationship between distress and quality perceptions. In terms of the COR theory, these results suggested that the nurses were not at the extreme ends of the distress scale, and were resilient within their work environment. Further, Spearman's correlations indicated that there were significant negative relationships between distress and recognition/job satisfaction. In terms of the COR theory these results

indicated that the loss of resources (recognition/job satisfaction) resulted in increased distress perceptions and may eventually lead to burnout in nurses. Finally, there was a moderately significant and positive relationship between recognition and job satisfaction. This relationship could indicate that these two resources are interlinked and that a nurse cannot have one without the other.

The Kruskal-Wallis H-test indicated that there was a significant difference between the nursing units in terms of their perceptions of distress and quality, suggesting that the different work environments and stressors could have affected the nurses' resources and resiliency. The H-test results also indicated that there was no significant difference in how the nursing units perceived recognition and job satisfaction, suggesting that there may have been other (or more effective) resources available to the nurses on units reporting higher quality and lower distress perceptions.

The Mann-Whitney U-test indicated that there was a significant difference in how RNs and LPNs overall perceived distress. The U-test when split by nursing unit also indicated that on one nursing unit there was a significantly different perception of quality between the RNs and the LPNs. These results suggest that there may be more or different stressors for the RNs than the LPNs and that different nursing environments may be more inclined to stress inducing situations for nurses, thus affecting the available resources and quality perceptions.

Further, the results, although not significant, indicated that overall RNs reported higher stress and higher quality perceptions than their LPN counterparts, perhaps indicating that the RNs may not experience the same kinds of stressors/threats to their resources or that they perceive the stressors differently than LPNs, and that some stressors may actually encourage the RNs to invest resources in order to gain resources. For example, RNs may be stressed by keeping up with

changing procedures and best practices in their nursing careers, but these stressors may actually encourage the RNs to seek further education or support from peers/educators/management, and by doing so increase their feelings of competence and social support. This could then lead to perceptions of higher quality of care. Research by Gallagher (2012) suggested that a person's need for cognition (information processing) would be positively related to managing resources in such a way that it would actually be a resource that made accessing appropriate resources less stressful on the individual. These research results indicated that the ability to manage resources (i.e. pacing oneself or asking for help) was negatively related to depressed mood at work and that a person's need for cognition was also negatively correlated to depressed mood at work. The ability to manage one's work resources has an impact on job and life satisfaction by minimizing work tension.

5.4 Research Implications for Nursing

5.4.1 Education. Nursing students experience stressors prior to entering the workforce. Better understanding of how individuals view and manage resources may be beneficial in terms of enabling instructors to teach individualized adaptable skills (and students to practice using said skills) in preparation for dealing with work stressors upon convocation.

5.4.2 Practice. Nurses may benefit from knowing what work related resources are available to them and how to access those resources; this may assist the nurses to adapt to their work demands. Nurses may also benefit from understanding where they are in terms of drains on their resources prior to reaching a 'burn-out' stage of distress. Encouraging nurses to reflect on their ability to deliver care may improve self-awareness and assist nurses to provide high quality of care. Moreover, encouraging nurses to adopt a culture of social support for all healthcare professionals on their unit may enable easy access to resources that could then act in unison.

5.4.3 Management. The Canadian healthcare industry facing a shortage of nurses and tight budgets may benefit from efficient use and management of human, monetary and equipment resources. Managers interested in recruiting and retaining healthy and competent nursing staff should be aware of their nurses' perceptions of care and distress. If managers know that their nursing unit is a zone of high stress they could try to buffer their staff's distress levels by understanding their staff's workload and by showing support for their staff by acknowledging accomplishments, listening to staff issues, and encouraging staff input in decision making processes. These actions may create a positive work environment for staff and patients that encourages recruitment, creates a culture where asking for assistance is acceptable, and may increase perceptions of the quality of care delivered by the nursing staff. Further, if a manager were to notice that their nursing staff was having difficulties adapting to their work demands, the manager may try to create situations where resources could be attained or alert employees of all the resources available to ameliorate the situation in hopes of retaining and motivating their staff to provide a high quality of care.

5.5 Study Limitations and Strengths

The sample for this study was taken from a population of Saskatoon medical and surgical nursing units, and as a result the findings of this study may only be generalized to equivalent nursing units. The study questionnaire had an adequate response rate of approximately 50.9%; however, the remaining 49.1% of potential respondents may have had other perceptions that cannot be included in this study as they did not participate. The secondary study utilized data from a larger data set, the researcher was restricted to using the data from the instruments chosen by the originating study, and questions could not be tailored to this study's interests. For example, the group studied consisted of both registered nurses and licensed practical nurses;

however the workload or responsibilities of each may have differed based on nursing unit and this was not differentiated within the questionnaire. Nonetheless, being unable to tailor the questionnaire may also be considered an asset, in that the results could be considered stronger because the questions could not to lead the results in a direction to perfectly suit the researcher's purposes. The questionnaire used one item to measure quality ratings, however this measure did not specify that it was asking about the current quality or account for recall bias, for example senior nurses' perceptions of improvement or decreased quality over the years. Lastly, there were two nursing units where LPNs were not employed, and the credentials could not be compared in these two units.

The Conservation of Resources (COR) theory suggests that people develop in circumstances that ideally share resources with them, imbue them with resources, and teach them how to foster and maintain those resources (Hobfoll, 2010). This theory also states that an individual's limited resources can be objects (i.e. car or home), conditions (i.e. marriage or employment), energy (i.e. credit or knowledge), and personal (i.e. self-esteem or skills). Therefore, in order to generate a complete picture of the COR stress process, the research must look at potential resource reservoirs or drains on its participants which may or may not be located in the work environment. A limitation of this thesis is that the questionnaire used did not have specific questions related to resources and this thesis did not study data related to any outside-life factors, as a result the results may not be wholly representative of stress from the perspective of COR theory. Further, it would have been interesting to compare the nursing units by their hospital's culture; however, information identifying the locations of the hospital units was not part of the available data set for this study.

The researcher is a registered nurse who has read the current literature, and had assumptions that there would be a relationship between distress and quality of healthcare based on work experience. However, the data used for this research was collected for a different purpose than this study outlined; thus it was unlikely that the researcher could tailor the results to fit this study.

The participant pool was not randomly selected; the nursing units were selected by the "Managing Quality in Canadian Hospitals" project because the nurses would have patients with tracer conditions. The participants were not required to participate by the health region, this may have resulted in stronger opinions being voiced by nurses who were biased or who felt the need to share their perspectives. The nursing units sampled did not have equal numbers of RN and LPN participants; in fact the number of LPN participants was nearly doubled by that of the RNs. This could have affected the statistical analysis when comparing the perspectives of the nursing credentials, especially since two of the six nursing units did not have LPNs. As such, caution should be used when interpreting and applying the results.

The nurses' questionnaire was a self-report measure, participants may not have understood all the questions they answered or may not have been able to report accurate information the day they completed the questionnaire (i.e. because of distractions or fatigue). The participants may have also had biases related to their profession, similar to those of the researcher, because of their professional practice/expectations.

5.6 Recommendations for Future Research

Based on the results of this study, the following recommendations for nursing research are proposed:

This research viewed quality from the perspective of the conservation of resources (COR) theory, wherein work stressors and resources interacted and effected the nurse's outcome for

better or worse, and may have also affected nursing care delivery. Future research should continue to investigate the relationship between nurses' perceptions of quality care delivery and work environments. Nursing units differ greatly in type of patient, the required care delivery, and even culture. As such it would be important to determine (define) what stressors and resources the nurses on specific types of nursing units feel most influence the quality of nursing care. The results of this type of research may have more direct applications to practice for nursing specialties.

In terms of the COR theory, perceptions are nested in a socially derived context, but perceptions are individualized. As such, research regarding individual perceptions of resource management should be completed as a means of increasing perceptions of control and potentially mediating perceptions of distress in both individuals and their social context.

Lastly, longitudinal research done to test nurses' losses and gains of resources and how the resource spirals effect quality of care delivery would broaden the usefulness of the COR theory on nursing units and could indicate which work related stressors/resources should be focused upon to efficiently improve the quality of the nurses' work environment.

5.7 Conclusion

Cost efficacy for quality healthcare delivery is of great interest to healthcare organizations in Canada. Quality work environments have been theorized as greatly influential to nurses and the nursing care provided to patients. The purpose of this study was to describe the nurse's perceptions of quality, distress, work place recognition, and job satisfaction. Hobfoll's conservation of resources (COR) theory was used as a means of focusing on how nurses' perceptions could be related to the environmental effects on quality care delivery. The results of this study indicated that overall nurses reported the quality of care they provide as relatively

high, that both nursing credentials reported ‘moderate’ amounts of stress (RNs reporting higher stress more frequently than LPNs), that nurses believed that the rewards they received for their contributions were ‘fair’, and that the nurses were ‘satisfied’ with their careers. However, all variables studied were not reported at ideal levels on the measurement scales, suggesting room for improvement in all areas of the nurses work context.

The data also suggested that distress and quality were negatively related; while recognition and satisfaction were positively related to quality and negatively related to distress. There was not a significant difference in the mean perceptions of RNs and LPNs, as such they could be studied as one group; but it was found that there was a significant difference in how nursing units rated their quality and distress even though there was no significant difference in how the nursing units rated their recognition or satisfaction. This suggested that there were other variables in which the nursing units differed and that they may have been related to perceptions of work environment stressors. In conclusion, knowledge of nurses’ perceptions of work environments, and the quality of care delivered, may assist healthcare organizations to develop cost efficient atmospheres that foster the highest quality of care for patients and provide optimal work settings for nursing employees.

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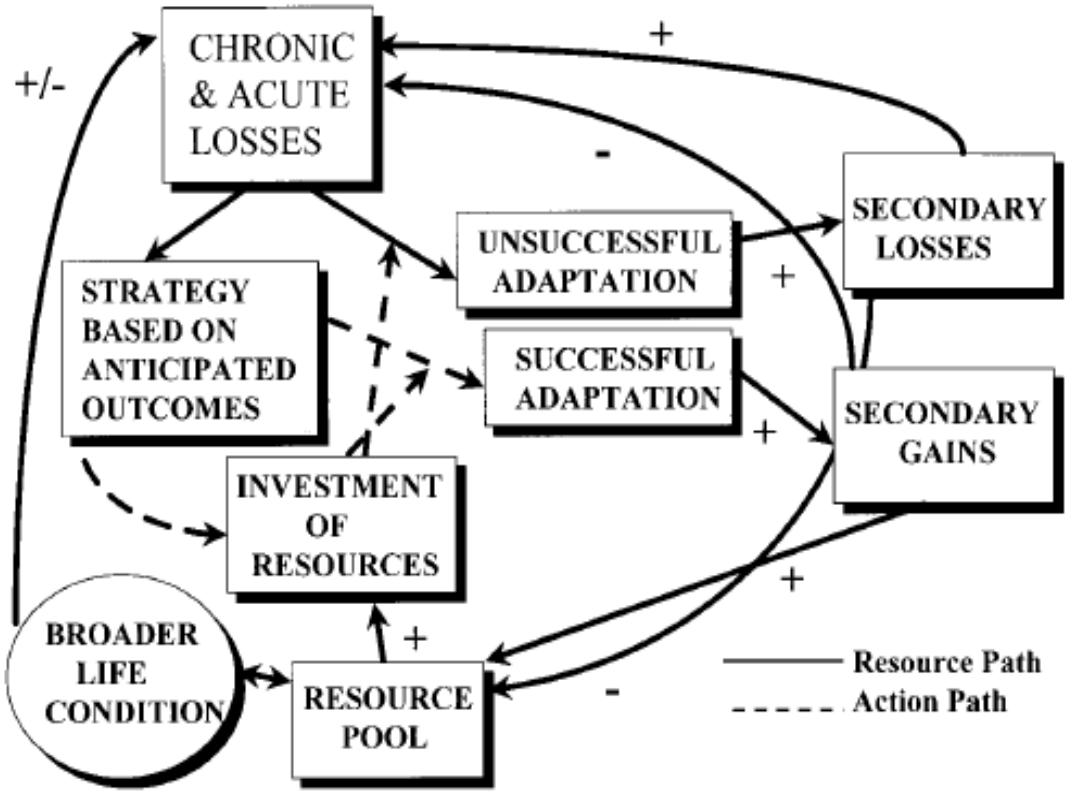
Appendix A

The Conservation of Resources (COR) Theory.

This figure (Hobfoll, 2001, p.358) shows the process of resource conservation in terms of the effect overall life conditions, acute loss conditions, and chronic loss situations have on the individual's resource pool. An individual has a set amount of resources available in their 'resource pool'. When resource loss processes occur, an individual applies a resource conservation strategy, which then leads to successful or unsuccessful adaptation through secondary resource gains or losses**.**



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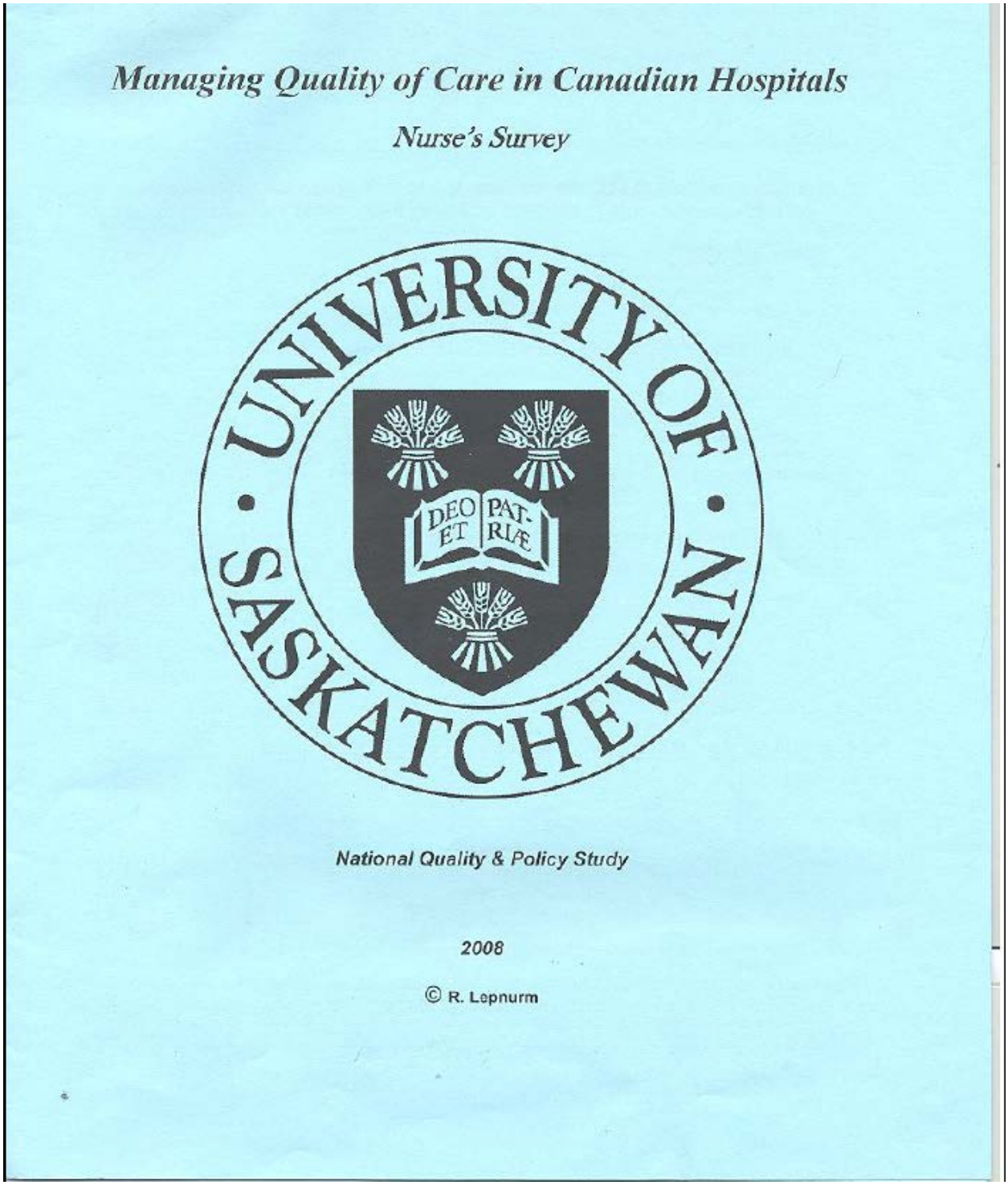
Appendix B

The MERCURi Research Groups' Nurses' Questionnaire



Managing Quality of Care in Canadian Hospitals

Nurse's Survey

UNIVERSITY OF SASKATCHEWAN

DEO ET PATRIÆ

National Quality & Policy Study

2008

Managing the Quality of Care in Canadian Hospitals

The objectives of this survey are to seek your views; and those of your colleagues across Canada, regarding: the quality of health care services and facilities in your practice area; your workload and the stresses of practice; your sense of professional equity along with career satisfaction and health care policy issues that are related to the quality of the health care system.

On what unit are most of your responsibilities (write on line_____)

1. Consider the state of staffing, equipment and facilities in the hospital unit where you provide care to patients, guided by the following standards:

0 = non-functional;
10 to 40 terrible to poor;
50 or 60 passable or adequate;
70 to 90 good to excellent;
100 = perfect.

Consider the state of the following resources and indicate your assessment

Category of Resources	Circle the appropriate response for each category											
Capabilities of medical staff:	*Don't know*	0	10	20	30	40	50	60	70	80	90	100
Capabilities of nursing staff:	*Don't know*	0	10	20	30	40	50	60	70	80	90	100
Capabilities of therapy staff:	*Don't know*	0	10	20	30	40	50	60	70	80	90	100
Functioning of treatment eqpt:	*Don't know*	0	10	20	30	40	50	60	70	80	90	100
Suitability of physical facilities:	*Don't know*	0	10	20	30	40	50	60	70	80	90	100

How often does your unit engage in the following quality related activities?

Quality Activity	Not at all	A few times a year	About 4 times a year	Monthly or more
Patient Care Conferencing	[ ]	[ ]	[ ]	[ ]
Reviews of Quality Reports	[ ]	[ ]	[ ]	[ ]
Reviews of Incident/Adverse Event Reports	[ ]	[ ]	[ ]	[ ]
Reviews of Accreditation Reports	[ ]	[ ]	[ ]	[ ]
Reviews of Clinical Performance Indicator Data	[ ]	[ ]	[ ]	[ ]
Review of Patient Outcomes	[ ]	[ ]	[ ]	[ ]

How would you characterize the organization of care on your unit?

Organizational Aspect	Not at all	For some patients	For most patients	For ALL patients
The use of CLINICAL PATHWAYS	[ ]	[ ]	[ ]	[ ]
Care of patients by teams of nurses	[ ]	[ ]	[ ]	[ ]
Is there a designated team leader	[ ]	[ ]	[ ]	[ ]
Inclusion of physician as part of the care team	[ ]	[ ]	[ ]	[ ]
Are teams multidisciplinary	[ ]	[ ]	[ ]	[ ]
Other organizational aspect (please describe_____)	[ ]	[ ]	[ ]	[ ]

Having considered the state of resources and organization of your unit, please indicate your assessment of the OVERALL QUALITY of care provided to patients on this unit, *using the following standards*
(0 =non-functional; 10 to 40=terrible to poor; 50-60=passable or adequate; 70-90 = good to excellent; 100= perfect):

Don't know	0	10	20	30	40	50	60	70	80	90	100

2. Organization of Responsibilities

What kinds of wards or units do you work in?

(e.g. orthopaedics, maternity, Community, school, intensive care, palliative care etc.)

Main Setting	Second Settings (as many as apply)
1)	1)
2)	2)
3)	3)
	4)

Are your position(s) permanent or casual?

Main	2nd	3rd	
			Permanent
			Casual
			Temp, relief or contract
			Other _____

Including all your positions, do you work:

- ☐ More than full-time
- ☐ Full-time
- ☐ About ¾ time
- ☐ About ½ time
- ☐ About ¼ time
- ☐ Less than ¼ time

Working Hours per Week

	Main Setting	Second Setting
Hours per Shift For your Main & 2nd settings	4 hr ☐	4 hr ☐
	8 hr ☐	8 hr ☐
	10 hr ☐	10 hr ☐
	12 hr ☐	12 hr ☐
	Other ☐	Other ☐
Shift Rotations	Straight days ☐	Straight days ☐
	Rotation ☐	Rotation ☐
	Straight Evenings ☐	Straight Evenings ☐
	Straight Nights ☐	Straight Nights ☐

Approximately how many hours do you work per week (excluding overtime)? ☐

In a few lines could you describe your work schedule, so that we get it right in our database

_____

_____

_____

_____

_____ Thank you

Overtime

	None	1-2 per week	3-4 per week	5-6 per week	7-8 per week	9-12 per week	13-17 per week	18+ per week
How many HOURS do you work OVERTIME in an average WEEK?	☐	☐	☐	☐	☐	☐	☐	☐

	None	one	two	3 or 4	5 or 6	7 or 8	9 +
How many of these Overtime Shifts are SATURDAYS OR SUNDAYS in an average MONTH?	☐	☐	☐	☐	☐	☐	☐
How many of these Overtime Shifts are on NIGHTS in an average MONTH?	☐	☐	☐	☐	☐	☐	☐

3. Profile of Duties

Please indicate the approximate percentage of time you now spend on these activities.	Direct Patient Care / Patient teaching	%
	Staff & student teaching	%
	Research	%
	Administrative Duties	%
		100 %

What changes in your duties would you like to make?

	decrease	No change	Increase
The number of patients you provide care to	[ ]	[ ]	[ ]
Your participation in teaching	[ ]	[ ]	[ ]
The range of clinical procedures or treatments that you provide	[ ]	[ ]	[ ]
Your participation in research activities	[ ]	[ ]	[ ]
Your involvement in administration	[ ]	[ ]	[ ]

4. Model of Nursing Care

For about how many patients on your Unit/ward do you carry out the following duties in a typical shift:	None	1 – 4 patients	5 – 8 patients	9 – 12 patients	13-16 patients	17 + patients
Develop patient care plans						
Monitor vital signs						
Administer medications						
Initiate or maintain IVs						
Wound care or change dressings						
Remove sutures or drains						
Assist with hygiene or mobility						
Team leading						
Coordinate tests & treatments						
Evaluate progress of patients						
Documentation in patients' charts						

Does your ward/unit classify patients according to:	Yes	No
Severity of condition		
Type of care required (e.g. orthopaedic, medical)		
Amount of care required (e.g. post-op, level 4)		

5. Stress in your work

How frequently do you:	Never	A few times a year	Once a month	2 - 3 times a month	Once a week	2 - 3 times a week	Every day
Have workdays when you can devote enough time to all of your patients?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Experience frustration dealing with demanding patients?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Express impatience when people do not respond to requests as quickly as they should have?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Have workdays which are so busy that you are physically exhausted at the end of the day?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Feel that you can concentrate on the tasks that should be done?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
End up doing tasks which you think are outside of your responsibilities?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Sleep soundly at night without worrying about your job responsibilities?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Express anger when people at work make mistakes	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Feel frustrated accessing facilities/services for patients?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Experience conflict between responsibilities at work and at home?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Feel that your work has desensitized your feelings/ emotions?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Cancel a personal or social activity in order to meet work commitments?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Feel depressed because of the death or serious illness of a patient?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Have such demanding workdays that you are emotionally drained at the end of the day?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Feel confident that you have been able to do your work at a high standard of care?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Feel that you are in control of your day-to-day working activities?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

How would you rate your level of stress?	Very Low ❑	Low ❑	Moderate ❑	High ❑	Very high ❑
How would you rate your level of health?	Very poor ❑	Poor ❑	Fair ❑	Good ❑	Very Good ❑

6. PROFESSIONAL EQUITY

Professional equity is defined as the balance between the contributions of nurses and the rewards they receive. Your responses to the following statements will allow you to assess the contributions you make, the rewards you receive, and whether equity has been achieved or not achieved.

Fulfillment

	Very Low	Low	Moderately Low	Moderately High	High	Very High
Your sense of gratification derived from providing care to patients is:	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your sense of contributing to society in your various roles as a nurse is:	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
The opportunities to use your most advanced clinical skills are:	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
The amount of choice you have over the activities you carry out or participate in is:	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your sense of accomplishment from your work as a nurse is:	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Financial Rewards

How well does your income reflect:	Not at all	Slightly	Partially	Moderately	Mostly	Perfectly
The time you spend on your duties?						
Your qualifications and training?						
Your responsibilities?						
The stresses of making risky decisions?						
Your years of experience?						

Recognition

	Strongly disagree	Disagree	Disagree slightly	Agree slightly	Agree	Strongly Agree
Your patients often express appreciation for the clinical care that you provide to them.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your contributions to the general well-being of your community are recognized.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
When you make an extra effort you receive recognition from your peers.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Physicians you work with show respect for you as a nurse.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Administrators you work with understand the stresses you experience as a nurse.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your efforts as a nurse have led to advances in your nursing career.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Overall, the full range of rewards you receive for all the contributions you make are:

Very Unfavourable	Unfavourable	Somewhat Unfavourable	Fair	Somewhat Favourable	Favourable	Very Favourable
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

7. Satisfaction Please indicate your satisfaction with the following aspects of your career

How satisfied are you with:	Very Dissatisfied	Dissatisfied	Somewhat Dissatisfied	Somewhat Satisfied	Satisfied	Very Satisfied
Your career advancement in nursing?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your success in meeting the needs of your patients?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your ability to access resources needed to treat your patients?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your capacity to keep up with advances in your clinical specialty?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your role in organizing treatment programs for patients in your community?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your authority to get clinical decisions carried out?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your ability to keep responsibilities at work from intruding on your personal life?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your ability to provide high quality care to your patients?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your nursing career, considering your various roles and responsibilities?	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

8. Work Group Cohesiveness

Cohesiveness refers to the way people interact when carrying out the tasks of providing patient care. We ask you to consider your relationships with your colleagues during the care of your patients in the hospital.

You and your colleagues work as a team

Strongly Disagree [ ] Disagree [ ] Disagree slightly [ ] Agree Slightly [ ] Agree [ ] Strongly Agree [ ]

You and your colleagues know they can depend on each other

Strongly Disagree [ ] Disagree [ ] Disagree slightly [ ] Agree Slightly [ ] Agree [ ] Strongly Agree [ ]

You and your colleagues are able to discuss difficult issues in a useful and respectful way

Strongly Disagree [ ] Disagree [ ] Disagree slightly [ ] Agree Slightly [ ] Agree [ ] Strongly Agree [ ]

Individual nurses pitch in to help each other

Strongly Disagree [ ] Disagree [ ] Disagree slightly [ ] Agree Slightly [ ] Agree [ ] Strongly Agree [ ]

You and your colleagues are confident in using new methods for patient care

Strongly Disagree [ ] Disagree [ ] Disagree slightly [ ] Agree Slightly [ ] Agree [ ] Strongly Agree [ ]

You and your colleagues regard each other as friends

Strongly Disagree [ ] Disagree [ ] Disagree slightly [ ] Agree Slightly [ ] Agree [ ] Strongly Agree [ ]

9. Confidence and authority in delivering patient care

Policies regulating the authority of nurses are highly relevant.

Please indicate your level of agreement with the following:	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I can decide on my own how to go about doing my work	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
I am confident about my abilities to do my job	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
I have a great deal of control over what happens in the ward/unit	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
I am provided with opportunities to gain new skills and knowledge	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
I am encouraged to bring new ideas into the ward/unit	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
The work I do is meaningful to me	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Meeting the needs of patients with difficult to treat conditions is:

BORING [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] EXCITING

Learning new skills and methods in treating patients is:

BORING [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] EXCITING

Using your nursing education in the care your patients is:

BORING [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] EXCITING

10. Challenges and Supports at Work

The role of supervisory managers in meeting challenges of work is important. Here we ask about the types of support that may or may not exist in your unit.

Please indicate your level of agreement with the following:	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
Your unit or supervisor provides you with sufficient information to do your job effectively	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your supervisor shows concern for your personal well being.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Staff in your unit are encouraged to exercise initiative in improving methods	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your supervisor encourages you to develop your skills and knowledge	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
You are able to undertake training programs that are beneficial to you	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your unit is committed to finding and using best practices	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your unit seeks to develop group problem solving skills	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
You have job security, for the next few years in your unit or in the organization	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

11. Leadership in the Hospital

The policies and examples set by senior administrators greatly affect the work of health care providers. ***Please indicate your opinion on the following aspects of administration.***

Specific behaviours	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
Administration values my contributions to the hospital	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
I am proud to tell people I provide patient care in this hospital	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Administration gives me opportunities to express my views	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Administration is honest in their dealings with me	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Administration treats everyone in a fair and consistent manner	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Administration has fair procedures to select ideas or proposals that are implemented	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Administration has fair procedures I can use to appeal decisions that affect me	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Administrators set good examples by their own behaviour	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
The organization communicates effectively regarding planned changes that will affect me	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
The organization provides me with training in order for me to adjust to planned changes	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

12. Organizational Culture

The culture of an organization affects the way people approach their work and their attitudes about the organization. ***Please indicate your view of the following aspects of culture in your organization***

Specific aspects	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
Patient care is well coordinated in your organization	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Cooperation between units to solve problems or handling of complex cases is encouraged	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your organization is committed to using objective standards for improving care	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your organization rewards people who do their work at a high standard of performance	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your organization rewards people or units contributing innovative ideas that work	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your organization learns and shares experiences with other organizations	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Your organization takes seriously suggestions of other units or outside experts	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
There are opportunities for advancement in your organization.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

13. Health Policies

Health care providers generally have strong opinions about our health care system and many issues have been expressed in the news. We would like your opinions on the most frequently discussed issues.

Which of the following best expresses your preference when paying for health care services?
(Indicate the answer that best applies).

[ ] Pay out-of-pocket for ALL the health services as I need them.

[ ] Rely on private insurance for ALL the health services I may need.

[ ] Rely on the current public-insurance system, which is supplemented by private insurance and out-of-pocket payments for the additional services I may need (e.g. prescription drugs)
[ ] Rely LESS on the public-insurance system, and MORE on private insurance and paying out-of-pocket for the additional services I may need (e.g. prescription drugs)
[ ] Pay higher taxes to expand the health services available to me as part of the public-funded system

[ ] Other: _____

In your opinion what is the appropriate share of personal responsibility for health care expenses, from income taxes, for the following broad socio-economic groups:

Socio-economic group:	*Circle the percentage level of taxation that you think is appropriate for each group:*
Lowest income (social assistance)?	0 - 5 - 10 - 15 - 20 - 25 - 30 - 35 – 40 - 45 - 50% or more
Low wage earners?	0 - 5 - 10 - 15 - 20 - 25 - 30 - 35 – 40 - 45 - 50% or more
Middle income skilled workers?	0 - 5 - 10 - 15 - 20 - 25 - 30 - 35 – 40 - 45 - 50% or more
Upper income professionals?	0 - 5 - 10 - 15 - 20 - 25 - 30 - 35 – 40 - 45 - 50% or more
Wealthy individuals?	0 - 5 - 10 - 15 - 20 - 25 - 30 - 35 – 40 - 45 - 50% or more

Do you think people should be allowed to pay out of pocket or have private insurance to get quicker access to health care services?

Definitely	Almost Definitely	Probably	Maybe	Probably not	Almost Definitely not	Definitely not
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Is the current method of relying ***mostly on public insurance***, **supplemented by private insurance plans with some out-of-pocket expenses** the best way to fund the Canadian health care system? *(Indicate the answer that best applies).*

[ ] Definitely, the current system functions well, although there may be some minor problems
[ ] Almost definitely, however, there are major problems in the current system that must be fixed
[ ] Probably, however systems used in other countries might be considered
[ ] Maybe the problems in the current system are so great that other systems might be better
[ ] Probably not, other systems are likely to be superior to the current system
[ ] Definitely not, other systems are superior to the current system

Should Canada consider a health care system that relies on public facilities and salaried health professionals (including doctors) for most people; and private practice with private facilities for those people willing to pay private insurance premiums and fees?

Definitely	Almost Definitely	Probably	Maybe	Probably not	Almost Definitely not	Definitely not
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

14. Demographics

Nursing Education (state education)

_____

_____

Nursing Qualification/Certification

RN ____

LPN ____

Other ____ Please indicate below

_____

Specialty areas within your practice

1)	
2)	
3)	
4)	

What is your age? ____

Female ____ **Male** ____

How many years have you been in practice? ____

Are you paying off student loans?

No	
Less than $10,000 in debts	
$10,001 - $30,000 in debts	
$30,001 - $50,000 in debts	
More than $50,000 in debts	

Marital Status

- ____ Single
- ____ Married/Common Law.....**how many days a week does your partner work?**
- ____ Separated/Divorced
- ____ Widowed
- ____ Other

- ____ Less than 1 day per week
- ____ 1 or 2 days per week
- ____ 3 or 4 days per week
- ____ Full-time

Do any dependent children live with you?

- ____ No
- ____ Yes.....List the ages of ALL your dependent children (*include students*)

____,____,____,____,____,____,____,____,____,____

Do any dependent adults live with you?

- ____ No
- ____ Yes.....List the ages of ALL your dependent adults

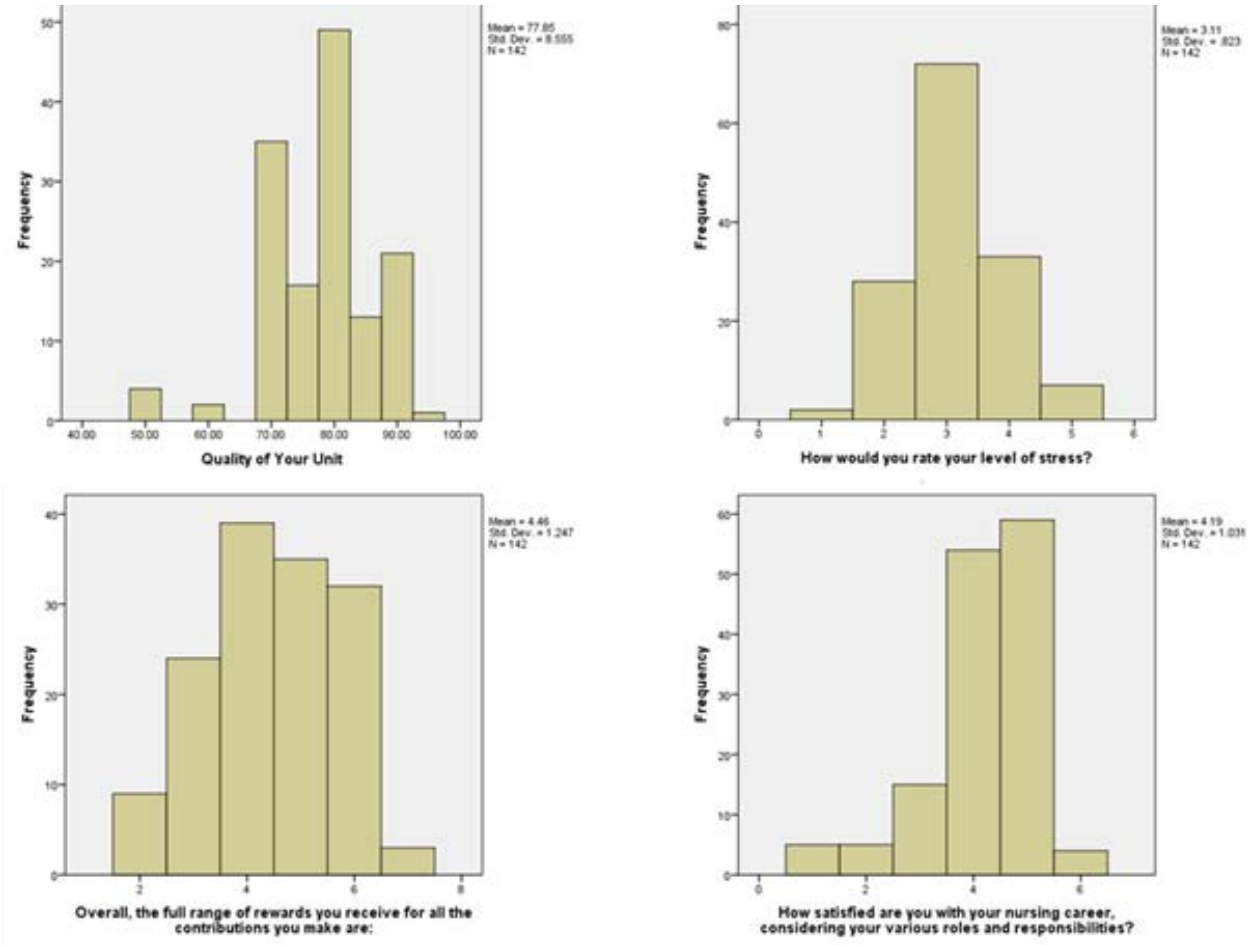
____,____,____,____

What issues should be covered in follow-up surveys?

Thank you for taking the time and effort to complete this survey. The results will be analysed and reported in broad groups. Your identity will be held in strictest confidence.

Appendix C

Histograms: Nurses' Perceptions of Quality, Stress, Recognition, and Job Satisfaction.



Appendix D

Levene's Test of Equal Variance Comparing Nursing Credentials.

	Nursing Credential	*n*	*M*	*SD*
Quality	LPN	58	76.55	10.68
	RN	84	78.75	6.63
Stress	LPN	58	2.90	.85
	RN	84	3.25	.77
Recognition	LPN	58	4.45	1.34
	RN	84	4.48	1.18
Job Satisfaction	LPN	58	4.17	1.06
	RN	84	4.20	1.02

		Levene's Test for Equality of Variances	
		F	**Sig.**
Quality	**Equal variances not assumed**	11.80	**.00**
Stress	Equal variances assumed	.01	.94
Recognition	Equal variances assumed	1.94	.17
Job Satisfaction	Equal variances assumed	.27	.60

Appendix E

Levene's Test of Equal Variance Comparing Nursing Units.

ANOVA

		Sum of Squares	*df*	Mean Square	*F*	Sig.
Quality	Between Groups	966.29	5	193.26	2.81	.02
	Within Groups	9353.60	136	68.78		
	Total	10319.89	141			
Stress	Between Groups	7.60	5	1.52	2.35	.04
	Within Groups	87.82	136	.65		
	Total	95.42	141			
Recognition	Between Groups	9.87	5	1.97	1.28	.28
	Within Groups	209.46	136	1.54		
	Total	219.32	141			
Job Satisfaction	Between Groups	3.26	5	.65	.61	.70
	Within Groups	146.60	136	1.08		
	Total	149.87	141			

	Levene's Statistic	*df*1	*df*2	Sig.
Quality	5.17	5	136	**.00**
Stress	1.02	5	136	.41
Recognition	1.37	5	136	.24
Job Satisfaction	1.36	5	136	.24

Appendix F

Levene's Test of Equal Variance Comparing Nursing Credentials split by Nursing Units.

ANOVA

Nursing Unit			Sum of Squares	*df*	Mean Square	*F*	Sig.
Unit 1	Quality	Between Groups	15.24	1	15.24	.16	.69
		Within Groups	2608.93	28	93.18		
		Total	2624.17	29			
	Stress	Between Groups	.04	1	.038	.05	.82
		Within Groups	20.93	28	.75		
		Total	20.97	29			
	Recognition	Between Groups	2.59	1	2.59	1.63	.21
		Within Groups	44.61	28	1.59		
		Total	47.20	29			
	Job Satisfaction	Between Groups	1.74	1	1.74	1.47	.24
		Within Groups	32.96	28	1.18		
		Total	34.70	29			
Unit 2	Quality	Between Groups	5.12	1	5.12	.14	.71
		Within Groups	1315.15	35	37.58		
		Total	1320.27	36			
	Stress	Between Groups	1.03	1	1.03	1.32	.26
		Within Groups	27.30	35	.78		
		Total	28.32	36			
	Recognition	Between Groups	.99	1	.99	.77	.39
		Within Groups	45.33	35	1.30		
		Total	46.32	36			
	Job Satisfaction	Between Groups	.10	1	.10	.10	.75
		Within Groups	32.82	35	.94		
		Total	32.92	36			
Unit 5	Quality	Between Groups	4.74	1	4.74	.10	.75
		Within Groups	790.00	17	46.47		
		Total	794.74	18			
	Stress	Between Groups	.94	1	.94	1.30	.27
		Within Groups	12.22	17	.72		
		Total	13.16	18			
	Recognition	Between Groups	.15	1	.15	.09	.77
		Within Groups	27.96	17	1.64		
		Total	28.11	18			
	Job Satisfaction	Between Groups	.04	1	.04	.04	.85

		Within Groups	16.49	17	.97		
		Total	16.53	18			
Unit 6	Quality	Between Groups	1169.53	1	1169.53	11.10	.00
		Within Groups	2213.08	21	105.39		
		Total	3382.61	22			
	Stress	Between Groups	.84	1	.84	1.93	.18
		Within Groups	9.08	21	.43		
		Total	9.91	22			
	Recognition	Between Groups	1.46	1	1.46	.63	.44
		Within Groups	48.37	21	2.30		
		Total	49.83	22			
	Job Satisfaction	Between Groups	1.05	1	1.05	.50	.49
		Within Groups	43.91	21	2.09		
		Total	44.96	22			

Nursing Unit			**Levene's Test for Equality of Variances**	
			F	**Sig.**
Unit 1	Quality	Equal variances assumed	.00	.96
	Stress	Equal variances assumed	2.67	.11
	Recognition	Equal variances assumed	1.36	.25
	Job Satisfaction	Equal variances assumed	1.38	.25
Unit 2	Quality	Equal variances assumed	.78	.38
	Stress	**Equal variances not assumed**	4.68	**.04**
	Recognition	Equal variances assumed	.01	.93
	Job Satisfaction	Equal variances assumed	.61	.44
Unit 5	Quality	**Equal variances not assumed**	7.02	**.02**
	Stress	**Equal variances not assumed**	3.64	**.07**
	Recognition	**Equal variances not assumed**	3.53	**.08**
	Job Satisfaction	Equal variances assumed	.38	.54
Unit 6	Quality	**Equal variances not assumed**	24.76	**.00**
	Stress	**Equal variances not assumed**	18.94	**.00**
	Recognition	Equal variances assumed	.25	.62
	Job Satisfaction	Equal variances assumed	.05	.82

Note: Levene's test could not be done for units 3 and 4 (no LPNs).